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RAJASTHAN AND AJMER

PART I C

APPENDICES

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RAJASTHAN NATURAL DIVISIONS with FORMER STATES & PRESENT DISTRICTS

SYMBOLS

⊙ PRESENT DISTRICT

+ FORMER STATE

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APPENDIX I

DESCRIPTION OF RAJASTHAN AND AJMER STATES.

PART I—GENERAL.

I. Composition of Rajasthan.

1. The appellation "Rajasthan" with its present concept, was given to this part of the country on 30th March, 1949, when the late Sardar Vallabh Bhai Patel, one of the makers and consolidators of free India, inaugurated this new State and drew a curtain over a long act in some of the oldest and most glorious of Indian States. The consolidated State represents the whole of what was called Rajputana in previous Census Reports minus the British district of Abu, the States of Palanpur and Danta and Tehsils Delwara and Abu Road of Sirohi State. It also includes a number of villages transferred from other States due to the removal of enclaves order and excludes certain villages transferred to other States. (A list of villages so transferred is given in Annexure I). This State is one of the Part B States in the general set up of the Indian provinces or States as they are now termed.

II. Position, Area and Boundary.

1. Rajasthan lies between 23°3′ and 30°12′ north latitudes and 69° 30′ and 78° 17′ east longitudes. Its area is about 130,206.7 square miles. It is roughly rhombic in shape. The east-west diagonal is about 540 miles long and the north-south diagonal about 510. It is bounded on the west and the north-west by Pakistan. Thence its northern and north-eastern frontier marches with the Punjab, P.E.P.S.U. and the Uttar Pradesh until it touches the river Chambal where it turns south-eastward. The eastern boundary is formed by the Chambal for about two hundred miles dividing the Jaipur and Kotah divisions from Gwalior. The southern boundary runs in an irregular zigzag line across the central region of India, dividing Rajasthan from Madhya Bharat and Bombay.

2. Ajmer is a Part C State situated in the heart of Rajasthan and consists of what was known as the Ajmer-Merwara in pre-independence days.

III. History.

1. Historically Rajasthan can claim to be the richest of all her sister States in India. There are perhaps no more interesting annals in the History of India than those of Rajasthan. Rock inscriptions of Asoka which have been found in Jaipur State, take one back to the third century B.C. and there is reliable evidence of the Bactrian Greeks having invaded a part of the country in the second century B.C. as is evidenced by the relics at Nagri near Chittorgarh called "Madhyamika Nagri" in ancient times. It was between the seventh and eleventh centuries A.D. that three of the Rajput dynasties, still represented by ruling chiefs, namely the Sesodias (or Gahlots) the Bhatis, and the Chauhans, appear to have established themselves in the country. The dynasties of the Jadons, the Kachhawas and the Rathors are said to date from the eleventh, twelfth and the thirteenth centuries respectively. To these clans or branches thereof belong the following families:—

Sesodias or Gahlots—	Mewar, Dungarpur, Banswara, Partabgarh and Shahpura;
Bhatis—	Jaisalmer;
Chauhans—	Bundi, Kotah and Sirohi;
Kachhawas—	Jaipur and Alwar;
Rathors—	Jodhpur, Bikaner and Kishangarh.

2. Constant warfare with the Mohammadan invaders and dynasties mark the succeeding centuries, during which the boundaries of their kingdoms were, though with intervals of expansion, gradually driven back, till they reached, at about the end of the fifteenth century, more or less their lines as they existed on 30th March, 1949. In the centuries which followed, the Rajput chiefs are found either carrying on spasmodic or guerilla warfare with Akbar and his successors, or in alliance with them and distinguishing themselves in their service as Governors, Generals and Soldiers, but gradually becoming feudatories or tributaries of the Mughal Empire.

3. The Jat State of Bharatpur belongs to the descendant of bold and adroit land-holders who raised themselves to the rank and power of territorial chiefs during the confusion of 18th century. Another Jat State of Dholpur, is a territory remaining with a family that had gained distinction earlier, though it had first acquired political independence in the same century and under same circumstances. When the Marhattas rose to power, they obtained a footing in Rajputana about 1756 and by the beginning of 19th century, Rajputana, except for the north and north-western portions of it, was on the verge of complete dismemberment, when the British appeared on the scene in Northern India. One by one treaties were made between the Rajputana States and the British Government, commencing with Alwar in 1803 and followed by ones with Karauli, Kotah, Bundi and Jaisalmer in 1817, Mewar, Jodhpur, Bikaner, Jaipur, Kishangarh, Dungarpur, Banswara and Partabgarh in 1818 and Sirohi in 1832.

4. The Muslim State of Tonk was formed out of the convention with the British Government, which allowed the famous Amir Khan, the mercenery leader of armies to hold certain lands which he possessed in 1817. The State of Jhalawar was created in 1838 by the British Government as a result of the treaty of 1817 with Kotah, whereby Zalim Singh of Kotah was granted certain districts of Kotah State. "Thus the whole of Rajputana lay prostrate at the feet of British."

5. The mutiny of 1857 demonstrated the value of the native States to the British Government. Lord Canning gratefully acknowledged the role of the States as "Break waters in the storms which would have swept over us in one great wave." In 1861 Sanads were issued which guaranteed the princes their status, dignity and honour. The paramountcy of the British Crown was thus established over these "yellow patches" in the great sub-continent of India. On the one hand, it provided a nexus between British India and the States and thereby integrated the economic and administrative life of the country. On the obverse side it drove a wedge between the two parts of India, which reared up high walls of isolationism around the States. The growing impact of modern conditions of life and international situation, however, did not permit this sort of isolationism to exist much longer. During the stress of the 1st World War, the country's war effort involved closer coordination of administrative activity in States as well as British Indian Provinces. The Great War also accelerated the march of the history and inevitably affected the temper of Indian Nationalism and the demand for the self-Government became more and more insistent. This led to the introduction of "Montague-Chelmsford Reforms". The Swaraj movement fired the imagination of the people. This marked the beginning of the policy of utilizing the services of States in organising a counter revolution and to neutralize or at least to isolate the growing upsurge of Indian Nationalism. Things went on in their own way to the advantage of the alien rulers until the Act of 1935 was passed. This was the first effort to provide for a constitutional relationship between the Indian Native States and the Government of India on a federal basis. The federal scheme of 1935 unfortunately proved still-born on account of the determined hostility of the Muslim League. This was followed by the Cripps Plan. In so far as the States were concerned it only stated that, whether or not a State adhered to the new constitution it would be "necessary to negotiate a revision of its treaty arrangement so far as they may be required in the new situation". The Cripps Mission did not improve matters and its failure gave a new turn to India's struggle for freedom. The assumption of Power by Labour in England, the increasing international complications, the aftermath of the

second World War and the growing realisation of the fact that it was impossible to keep under subjection four hundred millions of exasperated people, brought about a change in the British Policy towards India. This necessitated the Parliament to send the Cabinet Mission to India in 1946. The States were given right to send their representatives to the Constituent Assembly. The Indian Independence Act of 1947 released the States from all their obligations to the Crown and a States' Department was created to deal with matters arising between the Central Government and the Indian States. The rulers were advised to accede to the Dominion on the three subjects of defence, foreign affairs and communications in which the common interests of the country were involved. Accordingly all the States acceded to the Indian Dominion by 15th August, 1947.

6. Thus after several centuries India became welded into a constitutional unit. With the advent of independence the popular urge in the States for attaining the same measure of freedom as was enjoyed by the people in the Provinces, gained momentum and unleashed strong movements for the transfer of powers from the rulers to the people. It was universally felt that the smaller State units could not have continued in modern conditions as separate entities, integration provided the only approach to the problem. The dynamic personality of Sardar Patel an overall confidence which the congress had gained over the masses and above all the compulsion of events brought about in no time the integration of 552 States, covering an area of 387,893 square miles with a population of 60.78 millions. These States were merged into and formed the Unions, out of which the United State of Rajasthan is one. In the beginning the States of Alwar, Bharatpur, Dholpur and Karauli combined into a union known as the Matsya Union. Later a union known as United State of Rajasthan was formed which, later, began to be called former Rajasthan consisting of Udaipur, Dungarpur, Banswara, Kotah, Jhalawar, Bundi, Partabgarh, Shahpura, Tonk, Kushalgarh and Kishangarh. Later again on 7th April, 1949 the States of Jaipur, Jodhpur, Bikaner and Jaisalmer joined the Union and last of all on 7th February, 1950 Sirohi joined it. Only 5 Tehsils and a portion of Tehsil Delwara of Sirohi State joined the Rajasthan and of the other two the remaining portion of Delwara Tehsil and the Abu Road Tehsil joined Bombay State.

7. For administrative purposes these States were arranged and divided into Divisions under Divisional Commissioners, Districts under Collectors, Sub-Divisions under Sub-Divisional Officers and Tehsils under Tehsildars all under a Central Secretariat with a ministry composed of the representatives of the people sitting at Jaipur which is the capital of the State.

IV. Physiography

Hill system.—1. The Aravalli range runs north-east—south-west from end to end across the country dividing it naturally into two parts—the north-western, which comprises 3/5ths of the total area, and the south-eastern which covers about 2/5ths.

North-western part.—2. The north-western part is, on the whole, a sandy unproductive area with considerable shortage of water supply, the conditions gradually improving towards the north-east, where the land is comparatively fertile and habitable. The desert extends from the region of the Luni river to Sind and thence to the Rann of Cutch and is characterised by long straight ridges running in parallel lines in lengths varying from 50-100 feet to 2 miles or so.

3. The sub-montane region at the foot of the abrupt 800-900 feet northern slopes of the Aravalli range, which absorbs the drainage of the area, is fertile, though towards the north and north-west of the Luni river, where the streams are only rain channels and ruts, the water-level becomes progressively deeper and the land less and less cultivable on account of paucity of water.

South-eastern part.—4. The region to the south-east of the Aravalli range is at a higher altitude, more fertile, and very diversified in character. It contains extensive hill ranges and

long stretches of rocky terrain and woodland, considerable rivers, wide valleys and fertile table-lands, and broad stretches of excellent soil.

5. The clearest line of the Aravalli range runs from Abu to Ajmer although the range continues north-eastwards as far as Dehradun where it abuts against the Himalayas. While this range has abrupt slopes on the western or Marwar side, it has gradual and gentler slopes on the eastern or Udaipur division side through a highly hilly terrain cut by deep gullies till in central Mewar it becomes a gently undulating plain in which emerge here and there irregular rocky prominences. In the south-eastern part of Udaipur division, the outskirts of the main Aravalli range do not subside into level tracts but form a confused network of outlying jungle-covered hills and valleys. To the north of Jhalarapatan town, the country rises to the level of a plateau, called Pathar on which lie for the greater part the districts of Kotah and Bundi. This table-land has a very diverse physiography consisting of more or less stony uplands, broad depressions and level stretches of deep black cultivable soil. To the east, this plateau has a gradual slope towards Gwalior and the catchment of the Betwa river; to the north-east is a very rugged terrain along the frontier line of the Chambal in Karauli, while, further northwards, the country settles down and opens out into the flat plains of Jamuna basin in the Bharatpur area.

Hill ranges.—6. The Aravallis are by far the most important amongst the hill ranges and mountains of this part of India and Mt. Abu (5,650 feet above sea level) is the highest point between the Himalayas and the Nilgiris. The other ranges though numerous are comparatively insignificant and Jaipur and Alwar lie amongst these. Bharatpur has a range of some local importance Alipur (1,357 feet above the sea level) being the highest peak. South of these are the Karauli hills which do not exceed 1,600 feet in height anywhere. To the south-west of these is a low but well-defined range running north-east, from Mandalgarh in Udaipur Division across Bundi to near Indargarh in Kotah, the hills of which display a clear scarp for about 25 miles on the south-eastern face. The Mukandwara range runs across the south-western districts of Kotah from the Chambal to beyond Jhalarapatan and exhibits a curious double formation of two separate ridges.

7. There are no other definite ranges although occasional hills and isolated crags as far south as Barmer District occur and two of which exceed 2,000 feet in height. All the southern districts of Dungarpur, and Banswara, the sub-division of Kushalgarh and the southernmost tracts of Udaipur Division are more or less hilly.

V. Geology.

Ancient Aravalli Mountain Chain 1.—Rajasthan is broadly divisible into two geological regions; the eastern half which is characterised by the Aravallis, and the western half. The present Aravalli ranges represent only the stump and roots of what was once a lofty mountain chain, probably rivalling the Himalayas, and extending, it has been suggested, from Garhwal in the north into South India and the Laccadives, tending to spray out towards the south. Their natural continuations would appear to lie in Mysore as well as the submerged ridge now forming the Laccadives This mountain once formed an important watershed which divided the drainage of the Bay of Bengal from that of the Arabian Sea and supplied water copiously to the ancient Indian plain. At present, it runs from the Gujrat plains north-eastwards into Delhi for a distance of over 400 miles and, as its trend lies parallel to the direction of the south-west winds there is practically no precipitation till the Himalayas are reached. Consequently, rainfall is meagre.

Aravalli synclinorium 2.—The Aravalli range consists mainly of a great synclinorium formed by the rocks of the Aravalli and Delhi ages, the latter occupying the central part of the ranges. The main ridges are made up of quartzites and divide the Vindhyans into two areas of different facies.

3. Everywhere the Aravalli system of rocks rests upon older gneisses on grey. homogeneous gneisses in Jodhpur; on banded gneissic complex in the main syncline of Udaipur Division and Ajmer State; on Bundelkhand gneiss in the Chittorgarh-Nimbahera-Sadri area; and, on gneissic granite of Karela and Ganor in Jaipur, the junction in all cases being one of an erosion unconformity. The general stratigraphic succession is as follows:—

5. Malani suite of igneous rocks.
4. Delhi system.
3. Raialo Series.
2. Aravalli System.
1. Banded gneissic complex and Bundelkhand gneiss.

Aravalli system—4. The Aravalli system is chiefly composed of rocks of an argillaceous nature, has great thickness and its rocks show increasing metamorphism from east to west. Unmetamorphosed representatives of the Aravallis are to be found in the Chittor-Nimbahera-Sadri area and comprise the basal quartzites and grits, shabs and cherty limestone, Ranthambor quartzites, Bhadesar quartzites and Khardeola grits. Another unmetamorphosed facies of the Aravallis are the Binota shales east of the Great Boundary Fault of Rajasthan.

5. The main body of the Aravalli rocks which have undergone metamorphism are limestones, composite gneisses and paragneisses, phyllites and slates schists with quartzitic intercalations. These rocks form three distinct belts in the Udaipur Division area. The central belt covers a wide region in central Udaipur Division which is bounded on the north-west by an extensive exposure of the pre-Aravalli banded gneissic complex, and on the south-east by large exposures of the Bundelkhand gneiss. The southern belt of the Aravallis occupies a large area near Salumbar and extends southwards into Partabgarh Banswara and Dungarpur. The third belt of the Aravallis forms several isolated outliers in the Bundelkhand gneiss of the eastern plain.

Raialo series—6. The Raialo series unconformably overlies the Aravalli system of rocks and consists of about 2,000 feet thick white limestone, quartzite, and thin basal sandstone and conglomerate, though the basal sandstone and conglomerate may be absent in many places as, for instance, in Jodhpur and eastern and central Udaipur Division, etc. The typical variety of this limestone is a medium-grained saccharoidal material of dolomitic composition and is known as the Rajnagar marble. The calcite-marble of Jodhpur-familiarly known as the Makrana Marble is correlated with the Raialos. In some places, as in Pur-Banera belt, the Raialos are highly altered as closely folded beds with steep dips and represent the much compressed synclinal cores.

Delhi system—7. The Delhi system, which is probably the equivalent of the Cuddapah system, occurs in great force in Eastern Rajasthan, extending from near Delhi to Idar, but shows the best development in the main synclinorium of Ajmer State and the Western Udaipur Division area. The synclinorium is traceable upto Jaipur and Alwar through a series of small ridges of buartzite and arkose conglomerate. In Ajmer State the synclinorium is divided into two by a tongue of the pre-Aravalli gneisses, the junction zone on both sides of this tongue showing shearing and the western syncline much instrusion by Erinpura granite and epidiorite. These two synclines coalesce to the south, in Jodhpur and Udaipur Divisions, and here for a distance of 40 miles the synclinorium, is only six miles wide although, further south, it widens and is buried deeper enabling higher zones to be preserved in the central core. The Delhi system is divided into two parts, the upper known as the Ajabgarh series and, the lower, the Alwar series. The latter is well-developed in the northern and southern parts of the synclinorium but almost absent in the middle, the former is much intruded by veins and lit-par-lit sheets of aplitic material. This system is comparatively little metamorphosed and of small thickness in eastern Udaipur Division, where it is believed to be represented

by Sawa grits and shales and Jiran sandstone. It is intruded by Erinpura granite which shows a great variety of texture and form over large areas west of the Aravalli range.

Vindhyan system.—8. Rocks of the Vindhyan system rest unconformably over those of Delhi system and are developed in some force in Rajasthan. Its components have the following stratigraphic succession and are predominantly calcareous and argillaceous at the bottom but mainly arenaceous in the upper part:—

Upper Vindhyas. Bhander series. Rewa series. Kaimur series.

Lower Vindhyas. Semri series.

9. The Semri series is exposed in Karauli where it overlies not the rocks of the Delhi system but Aravalli phylites. Galauconite beds occur in it. On the southern side of the Chittor Jhalrapatan Vindhyan area, about 1,000 feet thick Vindhyan beds consisting of grits and conglomerates, Nimbahera shales, Nimbahera limestones and Suket shales overlie shales of probable Aravalli age. On the south-east of the Aravalli country the Vindhyan show markedly the effects of folding and overthrust due to earth movements.

10. The Lower Vindhyans of western Rajasthan are very much altered and are composed of a group of rhyolitic lavas with abundant pyroclastic material, resting unconformably on the Aravalli schists, which are known around Jodhpur as the Malani series. These extrusives are connected with plutonic magma reservoirs, which are exposed through erosion in parts of Rajasthan as granite bosses.

11. The junction of the Vindhyan with the Aravallis on the north-western side is one of a Great Boundary Fault which is traceable from the south-eastern limits of the outcrop as far north as Agra.

Jurassic system.—12. Outcrops of rocks of the Jurassic system occur in Bikaner and Jaisalmer but the greater part of these formations are concealed by desert sands and alluvia. They represent two facies here—one arenaceous and, the other, calcareous.

Deccan traps.—13. Deccan traps, which cover about 200,000 square miles of the Indian territory in Bombay, Kathiawar, Cutch, Madhya Bharat, (Madhya Pradesh), and parts of Deccan and are well over 7,000 feet thick, are also found to occur in south-eastern Rajasthan, mainly in Banswara, the greater part of Partabgarh, and Kushalgarh.

Eocene.—14. Eocene rocks occur in Bikaner and Jaisalmer where they overlie the Cretaceous and Jurassic strata.

Pleistocene system.—15. The desert sands of Western and south-western Rajasthan, which extend up to Sind, have been assigned the Pleistocene age. They cover an enormous area which, inclusive of Sind is about 400 miles long and about 100 miles wide. The depth of the sand varies from a few score of feet to several feet, the sands overlying an irregular rocky floor. Sometimes ridges and prominences of the rocky substratum emerge out of the sandy wastes. Over the great part of the area, the sand is piled up into dunes—the longitudinal ridge—like dunes being common in the southern part where the winds are stronger, while 'barchane'— the cresentric type of dunes—are common in the interior. A large part of the desert, however, is not a perfect sandy waste for it supports exerophytic vegetation of a scrubby, stunted type. In areas of thin sand cover, the underlying soil is found to be rich and is cultivated with the help of water drawn from below and, in many places, subsoil water drawn from some depth is found in good quantity. The development and advance of desert is to some extent attributable to destruction of forests.

VI. Mineralogy.

1. A fair variety of minerals are known to occur in Rajasthan but not all of them have been developed yet and the commercial possibilities of several still remain to be assessed. The present mining industry in this part of the country is only about two decades old and was, and still is, to a large extent restricted to mica mining and stone quarrying, these two fetching a royalty of about Rs. 1,500,000–1,600,000 per year. In more recent years, the mining companies have begun to take interest in other minerals such as soapstone, manganese, Kyanite, etc. Emerald has been worked for sometime with fair success by two firms in Udaipur Division. Another firm in the same area has been operating the only well-known lead-zinc deposits in India. Lignite in Bikaner has also been exploited for a number of years. In recent years beryl, which used to be produced for overseas export, has gained greater importance. Many new beryl deposits and some uranium and thorium deposits have been discovered by surveys carried out by the Atomic Energy Commission of the Government of India, a large number of which are now under operation. Both beryl and radioactive group of minerals are chiefly controlled by the Atomic Energy Commission and Rajasthan is the biggest beryl producer in India.

2. A brief description of the mineral resources of Rajasthan is given below:—

(a) *Apatite* which is used in the fertilizer industry occurs in pegmatites in variable amounts in Udaipur and Jaipur Divisions and if collected would form a considerable amount.

(b) *Asbestos* occurrences of the tremolite variety are more common, the long fibre soft variety chrysotile being rare. Tremolite is found in many places, the important known occurrences being at Jawas (Kherwara), Gamguda (Nathdwara), Deogarh, Kuanthal, Tikhi, Dolpura and Delas, Mola-ka-Guda (Khamnor) and at Dewal in Dungarpur, all of them being in Udaipur Division. Chrysolite is known to occur in small deposits in Jakol and Khymadu in Dungarpur. On the whole the extent of these deposits is small and their quality poor.

(c) *Barytes* occur at Sainpuri, Umrain, Bhagat-ka-bas, Khora Makrora and Burasidh in Alwar, and at Hathori in Bharatpur. These deposits are generally small and may not support a good sized lithopone factory, but much of the material can be used successfully as a filler, in drilling mud composition, paper, linoleum, and cloth manufacture.

(d) *Bauxite* A minor occurrence of bauxite is known in the southern half of Jhalawar.

(e) i. *Building stones* form a very important source of revenue to Rajasthan and the industry is widespread. Rocks of almost all geological ages have yielded material for building purposes and in the villages and not infrequently in the towns as well, a hard and compact variety of mica-schist and phyllites of the Aravalli system have been used in house construction. The main source of building materials is however in the Vindhyan rocks, the limestones of which yield excellent slabs capable of taking a high polish and show a variety of colours varying from yellow through brown to deep chocolate or black. The same system of rocks yields excellent sandstones which have been used from very ancient times for building purposes more particularly in the construction of the Red Fort, Juma Masjid, Fatehpur Sikri, Government House and Secretariat at Delhi, etc. The quartites, phyllites and slates of the Delhi system are suitable for slabs, flagstones, masonry stone, ballast and rubble, etc. The saccharoidal dolomite marble of the Raialo series is used mainly for tombstones and ornamental pieces but some old structures, such as the bund at Rajsamand, has been almost entirely made of this material.

ii. Masonry stone and slabs are obtained in Jaipur at Todaraisingh, Bhankri, Chiloli Jaisinghpura, etc, and almost throughout Udaipur Division from the Aravalli schists and phyllites.

iii. Slabs, ballast, rubble, masonry stone, etc. are obtained from the phyllites, quartites and slabs, etc. of the Delhi system in Jaipur, Alwar and Udaipur.

iv. Sandstone for floor slabs and roofing is obtained from the Vindhyan rocks in Jaipur, Kotah, Karauli, Bharatpur, Dholpur, Udaipur, Jodhpur, and Bikaner, those from Jodhpur being largely favoured.

v. Limestone of excellent quality from the Vindhyan system suitable for flooring slabs, tiles, etc., is obtained in South-eastern Udaipur Division and in Kotah. A polishing factory exists at Ramganj Mandi in Kotah in which a very fine polish is given to limestone and beautiful tiles and slabs are obtained. In Udaipur Division, however, the surface of the stone is only crudely smoothened, although the limestone of this part is equally good for finely polished tiles, etc. At Lakheri in Bundi a cement factory is working the limestones for cement manufacture.

vi. The fossiliferous Jurassic limestone of Jaisalmer is capable of taking a very high polish and is suitable for use as an ornamental stone.

(f) i. *Clays*: Occurrences of clays are fairly widespread in Rajasthan but are chiefly sporadic. Fuller's earth occurs in Bikaner and Jodhpur. The only second occurrence of bentonite is known in Jodhpur, the first being in Kashmir. A fireclay is known to occur as narrow intercalations in sandstone near Kita and Devikot in Jaisalmer, besides other occurrences of clay deposits in Lathi sandstone in the neighbourhood of Devikot, in the nummulitic rocks of Ramgarh, the Kaolin variety being found in Khunyiyala and Mohangarh.

ii. Thin white clay bands, a large part of which has been coloured deep red or chocolate or yellow by ferruginous solutions, extend from Gajner to Madh in Bikaner and attain some thickness in the latter locality.

iii. China clay occurrences are known in Karauli at Alanpur and Narauki and in several places in Kotah, and at Sabalpura and Umar in Bundi, and at Khela-khed and Dag in Jhalawar.

iv. Minor white clay deposits are also reported from Mangrop, Aral and Banera in Bhilwara District and from Dungar Saran in Dungarpur.

v. In Jaipur, Kaolinitic clays are reported from Buchara, Raisera, Phalodi, Basu, Ghaskoki Khani and Banshko, and the deposits are fair sized.

vi. The largest number of clay deposits, which include China clay, ball clays, bentonite and Fuller's earth, are known in Jodhpur at Mundwa, Bhadres Nadiya, Bhopa Parmarki Dhani, Gisala, Chitar, Sardhana, Sutar Parmaki Nadiya, Jogi Magra, Nimri, Indewar, Rani, Litariya, Khajwana, Shekhasar, Gunga, Bhimal, Sansi, Nimla, and Chaondia. Other materials for a ceramic industry also occur in fair abundance in Rajasthan, for instance, felspar, quartz, gypsum, lime stone, crude soda, calcite, etc. The possibility of a good-sized ceramic industry may not therefore be remote.

(g) *Emerald* is being worked at Kalaguman and Tikhi in Udaipur Division. The total sale value of the gemstone for the years 1945, 1947, 1948 and 1949 is Rs. 773,542.

(h) *Garnet* occurs abundantly in the Aravalli and Delhi schists in Udaipur Division, Jaipur and its sub-division Kishangarh. Almandine garnets of Sarwar in Kishangarh and Rajmahal in Jaipur have been occasionally used as semiprecious stones but are not very popular. Their use in the modern abrasives industry is problematic but, probably, some use can be made locally of this abundant and cheap material as an abrasive.

(i) *Glass sand* deposits occur in several places in Rajasthan. Those near Bundi, and in Sawai Madhopur, Dhula and Jhir, in Jaipur, at Mudh in Bikaner and near Zawar in Udaipur Division are the more important ones. A number of glass factories are working in Rajasthan at Bikaner, Jodhpur, Dholpur, Bharatpur and Udaipur but the products are not of high quality. The quality of the sand of some deposits is on the whole not very good for glass manufacture but an improvement in technique is also indicated.

(j) *Gypsum* deposits of importance are known in Bikaner and Jodhpur. The Bikaner occurrences are at Jamsar, Lunkaransar, Dhirera, Bithnoke, Kaoni, Suratgarh, Dholeran and Jaisalmer and yield material of high purity analysing 25% gypsum. The Jodhpur occurrences are at Khairat, Kavas, Bhadana, Nagaur, Malgu, Bhadwasi, and Khatni. Three deposits are also reported from Shri Mohangarh at Jaisalmer containing gypsum of high purity.

(k) *Kyanite* occurs in Sansera, Saharan, Bhilwara, Sardargarh and other places in Udaipur Division and in Dungarpur in Pegmatites and has been worked on small scale sporadically.

(l) *Lead*—See zinc.

(m) *Lignite* deposits of Bikaner, which are fairly extensive, have been exploited for local use. Some new occurrences of the fuel are reported from Jodhpur.

(n) *Manganese ores* of varying quality and richness are known to occur over a considerable area in Banswara and Kushalgarh where they are being worked. Several small deposits of the ore are known to occur, also at other places, in Udaipur Division which have been sporadically worked at different times.

(o) *Marble* occurs in several places in Rajasthan. The Makrana marble of Jodhpur is well-known and has been used in the Taj Mahal at Agra and in Victoria Memorial at Calcutta. The Devimata marble of Udaipur is fine-grained, compact and hard, but is not so popular because of the last named quality. In Jaipur, marble occurs at Raialo, Jhiri, and Bhainslana. The Rajnagar marble of Udaipur is not capable of taking a high polish. In recent years marble has been facing severe competition from high grade cements and its popularity has considerably decreased.

(p) *Mica* forms the most important mining industry in Rajasthan. The mineral is derived from pegmatites intruding into the mica schists of the Aravalli and the Delhi systems and the Raialo series or the pre-Aravalli granites. The main production of good quality mica, however, is obtained from the pegmatites in the Aravalli schists. The main producing districts are Udaipur Jaipur and its sub-division Kishangarh. Dungarpur and Banswara are also capable of production to a lesser extent but have not been largely worked so far on account of inaccessibility. Ruby, green and black micas are found in abundance and the quality matches that of Bihar, but the common occurrence of fluting and buckling in the books reduces their value. The royalty on mica is an important source of revenue to Rajasthan.

(q) *Molybdenum* ore of doubtful economic value is reported from Mandaoria in Kishangarh.

(r) *Ochres* of yellow and purple colour occur at Chittorgarh in Udaipur Division and at Shahabad in Kotah. A reddish variety is also reported from Jhalawar.

(s) *Pyrites* are reported from several places in Udaipur Division at Badnor, Bherun Khera, Patan, Kotra, Zawar and could, probably, be utilized for the recovery of sulphur.

(t) *Salt* as common salt, sodium sulphate and saltpetre occurs at Sambhar, Pachbhadra, Didwana, Phalodi, Luni and Kanod in Jodhpur; at Kachor and Rewassa in Bharatpur and Lunkaransar in Bikaner, in shallow lakes covering several square miles of area, that at Sambhar being the largest with a length of 4 miles and a width of 1½ miles. About 150,000 maunds of sodium sulphate are recovered every year.

(u) *Soapstone* occurs mainly in Udaipur and Jaipur Divisions. The Udaipur Division occurrences are at Banswara, Chandpura, Ghevria, Devpura and Lakhavli. Those of Jaipur are at Dagotha-Jharana, Dholeta, Dhawan, Bir Kanarwas, Kamarpur, Garri, and Nawai. The soapstone is usually of good quality and sold in powdered form. Some siliceous varieties of soapstone are also known in Udaipur Division which could probably be well utilised after heat-treatment.

(v) *Tantalite-columbite* groups of mineral occur occasionally in several pegmatites in small amounts in Udaipur Division. It has been worked for a while on a small scale till the year 1946 or 1947 for export.

(w) *Tin* ore occurs occasionally as cassiterite in pegmatites in Udaipur Division but these occurrences are of no value.

(x) *Wolfram* deposits at Degana in Jodhpur have been known for a long time and have been worked at different times. The present prices of wolfram which is a strategic mineral, are favourable for systematic exploitation.

(y) *Zinc* and *lead* ore occurrences are known in Betumi, Dariba, Rewara, Zawar and several other places. The Zawar occurrence is in Aravalli dolomitic limestone and is chiefly a sphalerite (zinc ore) lode with considerable development of galena (lead ore). The deposit has been worked for several years and is the only deposit of any importance known in India so far. Its prospects are good. It is being primarily worked for lead but utilization of the zinc ore is also receiving attention. The zinc ore probably carries greenockite (cadmium sulphide), the recovery of which has not been undertaken so far. Galena yields small amounts of silver.

3. The following table gives an indication of the production possibilities of some of the important minerals of Rajasthan:—

RETURNS FOR SOME IMPORTANT MINERAL PRODUCED IN RAJASTHAN FROM 1947 TO 1950.

Minerals	Years	Quantity (Tons)	Value (Rs.)
(1)	(2)	(3)	(4)
1. Barytes	1947	85	1,700
	1948	..	..
	1949	22	1,320
	1950	..	..
2. Building Materials	1947	782,680	2,034,553
	1948	1,088,900	5,144,973
	1949	384,741	4,029,585
	1950	..	..
3. Calcite	1947	1,249	18,735
	1948	245	4,043
	1949	600	39,000
	1950	806	13,868

Minerals.	Years	Quantity (Tons)	Value Rs.
(1)	(2)	(3)	(4)
4. China Clay	1947	4,476	58,364
	1948	480	12,725
	1949	937	33,380
	1950	..	..
5. Emerald	1947	943 lbs.	182,275
	1948	278 lbs.	252,127
	1949	126 lbs.	36,035
	1950	72 lbs. 16 Tolas.	14,778
6. Fullers' Earth.	1947	2,809	28,805
	1948	5,924	171,590
	1949	4,852	49,920
	1950	4,400	..
7. Gypsum	1947	24,189	55,224
	1948	46,732	290,253
	1949	92,821	372,188
	1950	171,172	808,355
8. Lignite	1947	62,099	593,252
	1948	72,371	756,676
	1949	67,365	782,242
	1950	20,205	225,745
9. Manganese	1947	1,734	21,493
	1948	2,082	44,408
	1949	3,424	151,931
	1950	8,049	114,995
10. Mica	1947	28,501 cwt.	4,773,300
	1948	28,750 ,,	3,827,282
	1949	20,521 ,,	4,451,188
	1950	28,000 Mds.	7,237,748
11. Salt	1947	497,152	4,178,391
	1948	432,966	3,663,924
	1949	378,857	3,267,468
12. Soapstone	1947	14,994	787,510
	1948	13,313	919,610
	1949	16,439	852,077
	1950	19,217	245,684

VII. Fauna*

1. India is the richest country in the world in respect of her fauna and flora. In this great sub-continent almost every type of animal family is represented. In Rajasthan variety of game is met all over the country. Much of the wild life in Rajasthan is fading away as elsewhere in India, either due to wanton destruction of forest

*Supplied by the Chief Conservator of Forests, Government of Rajasthan.

inhabited by game or due to their unrestricted slaughter by man. After partition lot of refugees have poured in Rajasthan. Some of them have made it a mode of earning their livelihood by killing animals by use of net etc. and selling their meat in the market. This has particularly been so in areas where there is no control by the State Forest Department. Whatever forests do exist in Rajasthan are due to love of Shikar of ruling princes. They took keen interest in wild life of their land and gave ample protection. Wild life was preserved for the sake of sport and for high quality of food substance. In the early days the rulers attached more importance to wild life compared to human beings. There were strict laws for their preservation. In Alwar no body was allowed to move on Shikar roads and if cow dung was noticed on Shikar roads and culprit was not traceable, whole village situated in the vicinity was fined heavily. Hence the result was that the wild game was met in abundance. Rulers were great sportsmen, and were proud of wild animals they possessed. Until recent times, princes were seen participating in big game hunting, such as pig sticking and shooting big game on foot,both of which are regarded as sports of the highest order. Moreover, in olden days hunting of big game was carried out by more primitive weapons, such as spears, swords and Javelins, it required great skill and power in killing wild animals. In this way there was never indiscriminate killing of wild animals.

2. Some of the fauna found in Rajasthan together with the places where they are found are given below:—

(a) *Tiger*: (Panthera tigris Linn) It is found in quite good number in forests of following places. Dungarpur, Jhalawar, Partabgarh, Sirohi, Kotah, Bundi Chittorgarh, Sawai Madhopur, Karauli, Bharatpur, Dholpur, Alwar, Udaipur and Jodhpur.

(b) *Leopards*: (Panthers pardus fusca) It is found in quite good number all over Rajasthan, especially in these localities *viz.*, Sawai Madhopur, Kishangarh, Karauli, Bharatpur, Dholpur, Alwar, Jodhpur, Udaipur, Dungarpur, Kotah, Bundi, Chittorgarh and Jhalawar.

(c) *Hyenas*: These are mostly available in following places: Sawai Madhopur, Dholpur, Alwar, Jodhpur, Dungarpur, Kishangarh and Kotah.

(d) *Wild boar*: (Sus cristatus wagner) This is found in abundant number in Rajasthan specially in these places:—Kotah, Bundi, Sawai Madhopur, Jodhpur, Udaipur, Dungarpur, Alwar, Bharatpur, Karauli and Dholpur.

(e) *Wild hog*: This species is found in following places in Rajasthan: Sawai Madhopur, Tonk, Bharatpur, Dholpur, Kotah, Alwar, Bikaner, Jodhpur, Jaisalmer and Udaipur.

(f) *Antelope*: This species is available at Jhalawar, Partabgarh, Jaipur, Tonk, Dholpur, Alwar, Sirohi, Bikaner, Udaipur, Jaisalmer, Jodhpur and Kotah.

(g) *Ravine deer*: This species is not found in abundance, only at following places they are seen: Kishangarh, Tonk, Alwar, Udaipur and Kotah.

(h) *Nilgau*: (Boselaphus tragocamelus) It is found specially at following places in quite good number: Kishangarh, Karauli, Bharatpur, Dholpur, Jodhpur, Kotah and Jhalawar.

(i) *Sambur*: (Rusa unicolar) These are found in quite good number all over Rajasthan. There was an attack of foot and mouth disease (Rinderpest) towards Alwar side, resulting in death of quite a good number. The places where they are mostly found are—Kishangarh, Bundi, Karauli, Dholpur, Alwar, Partabgarh, Kotah, Jodhpur, Udaipur, Dungarpur, Sirohi and Jhalawar.

(j) *Chital*: (Axis axis erxl) This is a rare species. It needs strict preservation. It is found at the following places: Jodhpur, Udaipur, Sirohi, Kotah, Bundi and Partabgarh.

(k) *Barking Deer*: (Muntiacus munljak zimm) It is common in Udaipur, Kotah, Bundi, Shahabad, etc.

(l) *Gazelle*: (Gazella bennetti sykes) It is found in quite good number at the following places: Bikaner, Jodhpur, Jaisalmer, Udaipur, Sirohi, Kotah and Partabgarh.

(m) *Wild ass*: (Gazella bennetti sykes) This species is decreasing. It is noticed at following places: Jodhpur, Bikaner and Jaisalmer.

(n) *Porcupine*: Common all over Rajasthan.

(o) *Black bear, sloath bear*: (Melursus ursinus) It is found at the following places: Kotah, Bundi, Partabgarh, Karauli, Udaipur and Sirohi.

(p) *Jungle Cat*: (Felis chans affinis) It is found in areas of Kotah, Bundi, Udaipur, Alwar, etc.

(q) *Desert Cat*: (Felis ornate gray) It is met commonly in Jodhpur, Bikaner and Jaisalmer.

(r) *Wild dog*: (Cyon dukhensis) It is not common, only rarely found in Jodhpur localities.

(s) *Langur*: (The black faced monkey) It is found all over Rajasthan.

(t) *Hare*: (Lephsru ficandatus). It is found commonly at following places: Bundi, Kotah, Udaipur, Alwar, Bharatpur, Karauli, Dholpur, Sawai Madhopur, etc.

(u) *Jackal*: (Canis aurns) It is found almost all over Rajasthan.

(v) *Wolves* (Canis pellip elsis) It is met at the following places: Kishangarh, Bharatpur, Dholpur, Alwar, Bikaner, Jodhpur, Kotah etc.

(w) *Squirrel*: (Scinrus indicus) It is common all over Rajasthan.

(x) *Mongoose*: (Herpestes) It is common all over Rajasthan.

3. **Birds:**

(a) Spur Fowl.

Pea fowl: (Pavocristatus) Protected all over Rajasthan by law.
Wild fowl: It is met in Udaipur.
Blue rock pigeon: (Columba libio) Protected all over Rajasthan by law.

(b) Jungle Fowl.

Partridge grey: (Francolanus poudicerianus)
Partridge Black: (Fancolanus francolenus).
Sand grouse: (Pteroeles entustus).
Painted sand grouse: (Pteroeles indicus).
Imperial sand grouse: (Pteroeles orientalis).
Green Pigeon.
Painted spur fowl: (Galloperdise lemilata).
Gray Jungle fowl: (Gallus Souneiti.)

(c) Water Birds.

Bastard: (Eupodotis edwardsi)
Bastard: (Honbara macqueeni)

Both these species visit during winter and are found commonly all over Rajasthan.
Nukta Duck: (Sarkidiornis melanotus)
Whistling teal: (Dendrocygna Jaunica)
Cotton teal: (Netapus coromandelienus)

(d) Other Birds.

1. Vultures, 2. Kites, 3. Coromorants, 4. Pond herons, 5. Para keets, 6. Avadavats, 7. Spotted munias. 8. Weavers, 9. Swifts, 10. Mynas, 11. Sparrows, 12. Golden oriole, 13. Paradise Flycatcher, 14. Crow pheasant, 15. Fantail fly-catcher, 16. Tailor bird and 17. Black headed shahin.

4. **Fishes:**

(a) *Masheer*, *Rohu* (Labeo rohita) *Lanchi* and *Gunch* are met commonly in all rivers, tanks and lakes of Rajasthan.

(b) *Crocodile*: (Pa-lustri). It is found commonly in the rivers Chambal and Banas. Last year Agricultural Department gave contract for fetching of Crocodiles, which has reduced their number considerably.

5. The fauna of Rajasthan as in other States is becoming extinct day by day and vigorous efforts on the part of the State are needed to check it. The Government has already passed the Rajasthan Wild Animals and Birds Protection Act 1951, but the rules thereunder have not yet been framed.

VIII. Soils.

1. There is a great paucity of information with regard to the soils of Rajasthan, no reports of soil surveys being on record. The only information available is from Settlement records but it is not based on scientific data and refers to a general classification of soils based upon their productivity and factors governing their irrigation, etc.

2. On the whole the soils in Rajasthan have not been transported much from the source of their origin, except by winds and streams which swell during the rainy season. Most of the soils are either insitu or if transported, not far from the parent rocks. It would, therefore, be comparatively simpler to map and demarcate the areas covered by different soils, when surveys of this kind are attempted.

3. There is a great variety in the texture and mineralogical composition of the soils of Rajasthan depending upon the nature of the subjacent rocks from which they are formed, as also variation in depth, in consistency and in colour. The depth of soil, generally, is not much and rarely exceeds 20-30 ft.

4. Broadly speaking the soils of Eastern, South-Eastern and Southern Rajasthan comprise red soil, regur, lateritic soil and alluvial soils.

(*a*) *Red soil.*—The red soils are derived from the granites and gneisses, the red colour being due to diffusion of the iron content of these rocks. They vary greatly in composition

and are moderately fertile. They are usually arenaceous with varying amounts of alkalies and iron. Phosphates are usually low in them. They are to be found to the east of the Aravalli range chiefly in Ajmer-State, Kishangarh, Udaipur Division, Dungarpur and Banswara.

(*b*) *Regur*:—Regur or black cotton soil (which is equivalent of the Russian Chernozem) is a black clayey soil with a high alumina, lime, and magnesia content, small and variable amounts of potash, and low nitrogen, phosphorus and humus. It is highly porous, swells enormously on wetting and develops conspicuous cracks on drying. It is formed from the weathering of basic rocks like the Deccan Traps and from some gneisses and cretaceous rocks in areas in which rainfall is low and between 20—30 inches. This type of soil is developed in some parts of Udaipur Division and its districts Dungarpur, Banswara, and sub-divisions Kushalgarh and Partabgarh and further east in the Kotah-Jhalawar terrain.

(*c*) *Lateritic Soils*:—Lateritic soils have a concentration of hydroxides of alumina and iron with loss of silica, lime magnesia and alkalies and are associated with laterites. Some amount of such soils is developed in Banswara, Partabgarh and Kushalgarh areas.

(*d*) *Alluvial Soils*:—Alluvial soils occur in several parts in Rajasthan but the newer alluvia do not cover large tracts. They are clay-loams very rich and fertile, which do not show much difference in composition over large areas.

(*e*) *Loen of Sand*:—North-western and western parts of Jaipur, Southern Bikaner, the greater part of Jodhpur and the whole of Jaisalmer are largely covered by loess of sand, there being no soil cap. Loess can support agriculture but water-supply is a serious problem. Where the sand is not deep, the underlying soil is very rich and fertile and can with sufficient irrigation be cultivated. Generally, this type of soil supports a low scrubby type of xerophytic vegetation.

IX. Agriculture*

1. Rajasthan State has been formed by integrating 19 former princely States. In those states the system of land tenure has not been uniform. But, never-the-less because of the existence of the feudal system, there is a striking resemblance so far as the area which was directly controlled by the State was concerned. This type of area, which we call Khalsa area is rather small in practically all the covenanting States. In Bikaner and Jodhpur Divisions it is less than 1/3 of the total area and the rest of the area is under Jagirs. In Jaipur Division, it is half of the total area and in Udaipur Division, it is 2/5 of the total area. Only in Kotah Division the area under Jagirs is only 17% of the total area which is small as compared to other Divisions.

2. The available area and crop statistics relate only to a particular year, namely, 1950-51. Many people hold an erroneous view, that Rajasthan is agriculturally barren and is covered with vast tracts of sand. True, a good deal of area in Rajasthan is covered with sandy soil, but also in this very State we have got vast fertile tracts in Jaipur, Kotah and Udaipur Divisions. Besides this, there is the granary of Bikaner Division, namely, Ganganagar District, where the area under irrigation is 6.2 lac acres. Even wet crops like paddy and Sugar-cane are also grown. Among the cash crops, cotton is also widely grown, total acreage being 3.75 lac acres. This is also an important oilseed producing State; total areas under oilseed being 18.3 lac acres and large quantities of Rape, Mustard, Sesamum and Linseed are exported. Practically all the pulses are produced in adundance with a comfortable exportable surplus. As regards food grains, the total acreage is 170 lac acres (including gram).

*Supplied by Shri N. S. Choudhry, Statistician, Agriculture Department, Rajasthan.

3. Speaking objectively, it may be noted that out of the total area of 731 lac acres (excluding Jaisalmer District) about 40·9 *i.e.*, 299 lac acres are under cultivation (including current fallows) and the rest *viz* 59·1% of the total area being uncultivated. Out of the uncultivated land nearly 5% is under forest,* 5% under pastures, 12% under land which can be brought under plough, given proper State encouragement while the rest is the waste and barren land, the developmental possibilities of which can safely be post-poned. The picture is summarised by the following table:—

Serial No.	Heads.	Rajasthan including Jaisalmer.	
		Area in '000 acres	Percentage to total land
1	Total (cultivated and un-cultivated)	70,478	100.0
2	Cultivated land	29,957	42.5
	(i) Net area sown	24,786	35.2
	(ii) Current fallows	5,171	7.3
3	Un-cultivated land	40,521	57.5
	(i) Forests	3,888	5.5
	(ii) Barren land and land put to Non-Agricultural uses.	13,064	18.5
	(iii) Permanent pastures	3,263	4.7
	(iv) Other fallow lands	8,985	12.7
	(v) Culturable waste land	11,321	16.1

4. The figures show that the net area sown is about 247.9 lac acres. To this if we add the area under crops in Jaisalmer and the double cropped area, the area comes to about 258.6 lac acres. Breakage of this area is as follows:—

Serial No.	Crops	Rajasthan including Jaisalmer.	
		Area in '000 acres	Percentage to total cropped area.
I.	Food grains		
	(i) Rice	205	0·8
	(ii) Bajra	8,701	33·6
	(iii) Jowar	2,002	7·7
	(iv) Maize	790	3·1
	(v) Wheat	1,567	6·1
	(vi) Barley	867	2·4
	(vii) Other cereals	1,371	5·3
	Total cereals	15,503	60·0
	(viii) Gram	1,522	5·9
	Total Food grains ..	17,025	65·9

* The Chief Conservator of forests estimates it to be 10 per cent.

Serial No.	Crops	Area in '000 acres	Percentage to total cropped area.
II	Pulses (excluding gram)	3,267	12·6
III	Oil Seeds	1,829	7·0
IV	Cotton	376	1·5
V	Sugarcane	43	0·2
VI	Other miscellaneous crops	3,314	12·8
	Grand Total ..	25,856	100·0

5. The above analysis shows that in Rajasthan practically all the food crops and cash crops are grown. Thus the State with its varied land has got large areas which are fertile and can be compared favourably with other States in India.

X. Arts and Manufacture.

Rajasthan is industrially under-developed. Recently industrialisation is being accelerated both by the Government and Private Agencies, as well as through Government encouragement. Amongst the important large scale industries the first place may be given to cotton industry, consisting of ginning factories, cotton presses, spinning and weaving mills, sugar mills, oil mills, cement factories, distilleries and electric power houses, etc. Amongst the less important may be mentioned some engineering works, printing presses, ice factories, hosiery factories, leather works and saw mills, etc.

2. Rajasthan has always been famous for cottage industries where articles of daily necessity were turned out for local consumption. Articles of artistic beauty have long been famous throughout the country owing to the patronage of the rulers of former Rajputana States.

3. There are 36 cotton ginning and pressing factories, four big textile mills (two at Bhilwara, one at Kishangarh and one at Kotah), seven engineering and metal workshops, 12 Oil mills (which are engaged mainly in crushing linseed and sesamum), two match factories (one at Kotah and the other at Fateh Nagar in Udaipur District), two glass factories, (one at Udaipur and the other at Kotah), distilleries, (located at Bhawani Mandi, Banswara, Kotah, Udaipur, Dungarpur, Nimbahera, Partabgarh, Lakheri, Kishangarh, Bundi and Kushalgarh), a cement factory (at Lakheri,) two pottery factories and three Dal factories.

4. Jaipur Metal Industries Ltd., Jaipur Glass and Potteries Works Ltd., Jaipur Spinning and Weaving Mills Ltd., Indian Hume Pipe Co., Jaipur Engineering and Construction Corporation Ltd., Jaipur Mineral Development Syndicate Ltd., Laxmi Metal Industries, Jaipur Bone Factory, Jaipur Maize Products Co., Jaipur Distillery and Rajputana Cold Storage and Refrigeration Ltd., are the important industrial concerns in Jaipur Division.

5. Other minor industries and concerns are engineering workshops, printing presses, ice and ice-candy factories, gota factories, Khandsari sugar and gur factories, knitting factories, soap factories, small scale saw mills, carpet factories, oil and dal mills and motor car repairing workshops, oil mills dealing mostly with mustard seed, ice factories, glass factories, distilleries, the pottery and the porcelain factory, paint and varnish factory, match factory, barium sulphate factory and radio assembling factory, Ghatshila Copper Works, stone quarries at Karaulli and salt manufacture.

6. In Ganganagar area a number of industrial concerns are springing up, such as, oil mills, sugar factories and distillery.

7. Important industries in Jodhpur Division are distillery, glass factory, metal works and utensil manufacturing factory, etc. Messrs. United Trading Company are perhaps the biggest concern in the whole of India for manufacturing sodium sulphide from sodium sulphate.

8. There is one bone mill at Pali in Jodhpur Division, and there are three more under contemplation.

9. The produce of wool in this State is estimated at 180 lacs of pounds annually or nearly 1/3rd of the total wool clip of India. The main wool producing centres are Jodhpur, Bikaner, Jaisalmer and Shekhawati.

10. It is in the manufacture of carpets, engraved and embossed brassware, silverware, ivoryware, marble statues and figures, paper machie work, jewellery and the delightfully printed Sanganeri 'Chhints', 'Chundaries' and 'Safas' that the genius of the Jaipur craftsman is most in evidence. The lapidary industry of Jaipur is considered to be the largest of its kind in Asia, if not in the world. The following cottage industries are not uncommon in Rajasthan:—handloom and 'Khaddar' weaving, 'Katha' making (Handi method); manufacture of iron tools, Agricultural implements, Fireworks and Crackers; preparation of salt and Khas scent; manufacture of Wooden toys, lac bangles and leather articles; Durrey and Niwar weaving; tie and dye work; handmade paper; enamel work; ivory work; water and oil colour painting; collection of honey; carpentry; coco-shell bangles making; cutch and gambier; lac; mat weaving; Gur factories; oil pressing; paddy husking; rope making; rose essence manufacture; blacksmithy; manufacture of brass utensils; bronze and bell metal industries; manufacture of clay-images and of gold and silver leaves; lime burning; pottery; stone carving; the tinning industry of Bhilwara; tanning; weaving of woollen blankets, etc.; printing presses; rubber stampmaking; soda water factory; soap making; manufacturing of swords; tailoring, etc.

11. Amongst small scale industries following works of art may specially be mentioned.

(a) *Enamelling*:—For enamelling on gold Jaipur is acknowledged to be pre-eminent, and some work is done on silver and copper. The enamel is of the kind termed 'Champleve' *i. e.*, the outline is formed by the plate itself while the colours are placed in the depressions hollowed out of the metal. The red colour is the most difficult to apply and for this hue Jaipur is famous. Partabgarh was once famous for a particular kind of artistic designs worked in gold on glass plates. Nathdwara, in Udaipur District, is also turning out fine enamel work on silver and gold.

(b) *Ivory work*:—Ivory turning is carried on to a small extent in Alwar, Bikaner, Jodhpur and Udaipur, the articles manufactured being mostly bangles, chessmen etc. At Etawah and Kotah, boxes and powder flasks are veneered with horn, ivory and mother of pearls set inlaid; while fly whisks and fans made of ivory and sandal wood are curiosities produced at Bharatpur. The fibres are beautifully interwoven and in good specimens are almost as fine as ordinary horse hair.

(c) *Lacquer work*:—Work in lac is practically confined to such small articles as toys, bangles and stools, and is carried on in most of the districts. In Bikaner lac, or some similar varnish, is applied to skin oil flasks (Kuppis), and in Shahpura lac is used in the ornamentation of shields and tables.

(d) *Steel work*:—Sword-blades, daggers, knives, etc. are manufactured in Jhalawar, Sirohi and Udaipur, and in the second of these districts, are often inlaid with gold or silver wire.

(e) *Stone carving etc.*:—The carving of small articles and models in stone is practised chiefly in Alwar, Bharatpur, Jaipur, Jaisalmer and Jodhpur. Among other industries in Rajasthan is the manufacture of the ornanmental saddlery and camel trappings, leathern jars for ghee and oil and silver table ornaments.

XI. Administrative Units.

From the time of the first Census of 1881 till April 1941, this part of the country consisted of (a) the States of Rajputana, each having its own administrative machinery and (b) the British District of Ajmer-Merwara. For the purpose of political supervision, it was divided into 9 political charges, subordinate to the Agent to the Governor General who had his head quarters at Mt. Abu. A new district Abu came into existence about 1921, being made up of a small area of 6 sq. miles leased from Sirohi Darbar. With the declaration of the Independence of India and the merger of individual States the administrative set up has been remodelled. At present in March 1951 for administrative purposes all the former States have been grouped into 5 divisions, namely, Jaipur, Bikaner, Jodhpur, Udaipur and Kotah each under a Commissioner, 25 districts each under a Collector, 79 sub-divisions each under a Sub-Divisional Officer and 207 tehsils each under a Tehsildar. Annexure III gives the details thereof. The various Thikanas in every State which used to be treated as separate Census Charges at previous censuses and which used to create great many complications on account of their being non-contiguous, have now all been treated as parts of the Tehsils within whose geographical limits their villages are situated. The villages transferred to Rajasthan as a result of the removal of enclaves order have been placed under the tehsils within whose geographical limits they are situated.

2. Ajmer has been made a Part 'C' State under the Chief Commissioner. It is divided for administrative purposes into 3 sub-divisions *viz.*, Ajmer, Kekri and Beawar.

XII. Natural Divisions.

In the past censuses Rajputana used to be divided into three Natural Divisions *viz*, the Eastern, the Southern and the Western.

2. In the present census, the Registrar General, India, has divided Rajasthan and Ajmer into the following five Natural Divisions, possessing more or less homogeneous physical features, rainfall, climatic conditions, etc.

(1) East Rajasthan Plain Division consisting of the districts of Jaipur, Tonk, Sawai Madhopur, Bharatpur, Alwar, Sikar, Bhilwara and Jhunjhunu.

(2) Rajasthan Dry Area Division consisting of Ganganagar, Bikaner, Churu, Jodhpur Barmer, Jalore, Pali, Nagaur and Jaisalmer districts.

(3) Rajasthan Hills Division consisting of the districts of Udaipur Dungarpur, Banswara and Sirohi.

(4) Rajasthan Plateau Division consisting of Chittorgarh, Kotah, Bundi and Jhalawar districts.

(5) Ajmer Division.

3. A detailed account of the population Zones, Natural Regions and Sub-Regions and Divisions of India and the position of Rajasthan and Ajmer States in them can be seen in Annexure II.

XIII. Two Theories about the physical formation of Rajasthan.

With respect to the physical formation of Rajasthan and its population there are two theories afloat amongst the experts on this subject. The first is that centuries ago, it was under sea. Gradually the sea receded, land came up with the ultimate result that it is all sand now and that Sambhar Lake is a portion of the sea. As land came up, Rajputs and other people of the neighbouring countries immigrated into it, settled and colonised there, and made it productive with their skill and resources; this process is still going on and the productivity in Rajasthan is increasing day by day.

2. The second theory is that centuries ago, it was a very flourishing country, so much so that, Rig Ved is said to have been written on the banks of Saraswati, which river has now dried up in the desert of Rajputana and that in the course of time rainfall gradually decreased, fertility of land consequently decreased. Consequently barrenness and desert features are gradually increasing.

3. The opinions of the Superintendent, Archaeology and Museums, Government of Rajasthan and the District Officers were invited and it is interesting to study their views.

4. The Superintendent Archaeology and Museums while supporting the second theory states that recent excavations in the valley of Saraswati in the Bikaner region have revealed to us a number of evidences which are in the form of pottery and Terracotta etc., which show that the bed of the Saraswati river was the home of prehistoric culture and can claim antiquity in point of date to the vicinity of 3500 B.C. Local people in that area and also in Jaisalmer reiterate the same point of view on the basis of local traditional tales which have come down to them from their forefathers and are still to be known from local octagenarians.

5. This theory is also supported by the Collectors of Alwar, Jalore, Sawai Madhopur, Barmer and Churu Districts. Their opinion is that the second theory seems to be more applicable to the desert of Rajputana. It is said that in old times there were several rivers like the Saraswati where Rishis and Munees used to worship on their banks. It was due to adundance of water and fertility of land that people of the Punjab etc. and of other countries were attracted to this land. They visited this land and settled therein. In course of time rivers went on making deltas like those of the Ganges, Indus etc., and at last they were dried up. They left sand only. It is due to that sand that Rajputana is a sandy desert. Fertility gradually turned into dryness and barrenness. The rainfall also decreased.

6. A reference to the Settlement Reports of the District of Bharatpur reveal an increasing tendency of soil towards desertness. It is an open secret that yield has diminished considerably. Rains are becoming uneven, irregular and scanty and desert features are appearing in several parts of this District.

7. The Collectors of Jaisalmer and Bhilwara uphold the first theory. According to them centuries ago, Jaisalmer was under the sea, which gradually receded and the land came up. Very little is known about the early history. Prior to the arrival of the Bhatis, Solankis and the Panwars, old Rajput communities, were holding petty estates. The Rajputs have never been good agriculturists. They migrated to this congenial territory as they could not hold their own in Northern India. The Bhatis defeated the old ruling families in this area and established their own kingdom. Jaisalmer was a flourishing town, as an important market on the main route from Baluchistan and Sind to Delhi.

8. Collector Sirohi holds a different view. According to him, the position of Sirohi District differs from both the theories *i. e.*, it was neither under sea nor a flourishing country. He states that this area was under forests and gradually due to the war in other parts of Rajasthan,

people like Rajputs came here and settled themselves. Forests were cut off for fuel and cultivation purposes and thus most of the area has become desert.

9. Collector Jodhpur holds both the theories to be correct. His opinion is that the fact that Rajasthan was a sea is a 'Geological theory.' Geological facts generally and always reveal the pre-historic culture. Sedimental rocks and sea shells are found in sufficient quantity in this desert, which corroborate the geological theory that it was once sea. Another more important point in support of this Geological theory is the fact that the foot of the rocks and hills bordering Jaisalmer and Khairpur Mir's State, throughout is slippery and very even which proves that there was time when ripples and waves have continuously been striking against the land which has resulted in this. According to him this theory is also supported by the description of Sapta Sindhu or seven rivers in Rig Ved. These seven rivers consisted of the 5 rivers of the Punjab, the Indus and the Saraswati, the lost river which is said to have been passing through Rajasthan area when it was not a desert. Slow and gradual flowing of sand from Cutch had made the river dry. The Buddhist monuments, Stupas and huge sculptures on the hills and rocks bordering Jaisalmer and onwards clearly show that there was climax of culture and civilisation and a good many towns were flourishing in this area.

XIV. Forests

The State of Rajasthan covers an area of 130,206·7 sq. miles of which about 12,929 sq. miles or 10 per cent of the total area is under forest. In view of the forest settlement and demarcation having not so far been carried out in most of the covenanting States the exact figures regarding area cannot be given.

2. These 12,929 sq. miles of forest are all reserved and protected forests inclusive of Zamindari, Jagir and Muafi forest area regarding which no statistics are available.

3. The percentage of the area under forest does not compare favourably with the requisite percentage of the forest area necessary for any country to satisfy the needs of its local population in regard to grass, timber, fuel and other forest produce. Again, these forests are quite unevenly distributed over the length and breadth of the country, being mostly relegated to the hill slopes and hill tops of the main Aravalli range. There are hardly any plain areas for the growth of these forests, there being a few grass *Birs* reserved and managed by the Forest Department with a view to supply, cut fodder grass, particularly during famine years which are not very uncommon in this part of the country.

4. The Forests in Rajasthan have been open to a number of abuses and misuses. In the absence of a proper survey, demarcation, and settlement of forest rights; coupled with the tendency of the people to regard them as the main source of earning their livelihood by indiscriminate cutting of the forest wealth, it was impossible to expect the forests to receive proper protection. Besides, of late there has been a tendency to deforest practically every bit of the plain forest area under the plea of "Grow More Food" campaign resulting in gradual depletion of the forest wealth. The practice of shifting cultivation locally known as "Valra cutting" is still prevalent in parts of Udaipur Division, a system so injurious to the forests.

5. Besides, the local Bhils and other inhabitants of hill areas of Udaipur District have recently been granted some very liberal concessions in the matter of unrestricted cutting of trees, not only for their bonafide domestic requirements but even for free sale. The same state of affairs seem to exist in respect of the grazing grounds, grass *Birs* etc., where due to uncontrolled and promiscuous grazing of both economic and uneconomic cattle beyond the capacity to which the land can stand, are resulting in a progressively decreasing yield and deterioration in quality of the grass. A list of grasses found in Rajasthan is given in Annexure IV. In some of the border areas

particularly towards Western Rajasthan, cattle from neighbouring States migrate practically every year to graze in the forest areas in Rajasthan. Forest fires are another menace and are a factor of constant recurrance.

6. The main forests lie on the Aravalli ranges and their hillocks. The type varying from dry deciduous mixed forest of teak in Banswara and Baran forest divisions to thorny scrub jungles hardly worth the name in the greater part of Jodhpur and Bikaner Divisions.

7. These forests are unequally distributed in the various districts. Rajasthan has a peculiar combination of the desert with as little rainfall as 1″ to as much as 60″ a year, striking feature of the geology being the oldest mountain of the world, the Aravalli range of hills running from south-west to north-east. The distribution of forest species go to form several sub-types, chief of which are;

(a) Gregarious dry forests of Anogeissus pendula and latifolia, on hill top and pure patches of Khair in valleys and plains near cultivated area with wide open blanks of various sizes occurring all over.

(b) Dry teak forests ranging from pure to mixed types growing in small patches.

(c) On the plateau and table lands main species is Boswellia Serrate gregarious or mixed with Anogiessus latifolia, Khair, zusyphus species, Diospyrus etc.

(d) Drier and more open type of mixed miscellaneous forests in which stunted trees are scattered over large grassy lands.

(e) Semi-dry type of miscellaneous forests in valleys and lower hill slopes.

(f) The tropical desert thorn forest consisting of uerophytic species like Balanites roxburghie, Prospis spicigera, Salvadora ollides and Adhatoda vescica.

8. The main items of the forest products are petty timber fire-wood and charcoal, Katha bamboos, grass, teak wood in small sizes, tendu leaves, palm leaves, tannins of dyes, fibres and flosses, drugs, hides and skin, honey and wax, gum, medicinal herbs, khus, flowers and fruits. These are disposed of either by public auction or by sale through royalty system.

9. During the 2nd Great World War there was a shortage of petrol and almost all trucks and public carriers were forced to depend on Gas Plants. There existed country wide dearth of forest produce. It was sensed by Jagirdars that sooner or later the Government will take over their forests and that in future they would be unable to sell their forests, hence they tried to cash their forest crops and the purchasers lured by prevalent attractive rates of forest produce, exploited these forests to their utmost. Not only the Jagirdars but other classes of people *viz.* (1) The contractors who took leases from the Jagirdars, (2) the agriculturists who took cultivating leases from them and (3) the Right Holders, who are connected with the forests, tried to exploit the vegetation so as to derive whatever advantage they could from this state of affairs. Jagirdars knew that they were about to lose their hold on their forests and so leased them out to persons under categories (1) and (2) for ready cash for nominal gain Contractors were sufficiently shrewd to realize that compensation would have to be paid to them at the high prices which were prevailing at the time, if Government takes or cancels the contracts. The local agriculturists tried to clear as much of forest land for cultivation as was possible and to obtain a right, if possible, on the areas. Jagirdars did not interfere with right holders to gain cheap popularity and embarrass the Government, and handed over their forests to local public as a free gift. The right holders thinking that the forests will be taken over by the Government laid themselves out to cut as much as they could. This resulted in widespread damage to forests. To control this widespread

destruction of forests the Rajasthan Government promulgated The Tree Removal Ordinance of 1949. Under this Ordinance licence is required for felling trees. Such licences are issued by the Revenue Authorities. It is highly desirable that all the Jagir forest areas all over Rajasthan be taken by the Government for management. This is the only way to check ruthless destruction of forests which is a national asset.

10. To prevent soil erosion by wind and to get suitable varieties of the plants to increase the fodder supply in the semi-desert area of Rajasthan, the Advisory Board of the Indian Council of Agriculture Research New Delhi approved a scheme costing Rs.48,300 in the year 1949 in the semi-desert area of Rajasthan which is popularly known as Shekhavati scheme. Experimental plantation was started at Jhunjhunu with success but later on the scheme was given up because the council stopped to give aid. However, efforts are being made to revive it by including this scheme under the Immobilisation of Rajasthan desert scheme.

11. A scheme for the creation and improvement of forest, costing Rs.21·75 lakhs, has been included in the draft outline of Five Year plan. As this amount is considered insufficient to cope with the gigantic task of afforestation in Rajasthan a fresh demand has been made to the Planning Commission to increase the amount to Rs.110·37 lakhs under the following heads.

(i) Roads and buildings	7·80 lakhs.
(ii) Plantation	100·00 lakhs.
(iii) Education	2·57 lakhs.

If the amount is sanctioned, it is hoped much headway will be done in afforesting the desert and semi desert areas of Rajasthan.

12. Rajasthan has been reduced to mere desert by man and goat. There is sufficient evidence to show that the Rajasthan desert is extending. Recent surveys carried out by the Survey of India compared with those carried out 50 or 60 years ago show that the desert has been spreading outwards in a convex arc roughly from Bhawalpur to Ferozpur, Patiala and Meerut to Aligarh and Kasganj at the rate of about ½ a mile per year during the last 50 years. This means that approximately three hundred square miles of fertile land are being converted into desert sands every year.

13. In view of its all India importance this problem has been given high priority and the Government of India appointed an *ad hoc* Committee to study the problem of immobilization of Rajasthan desert. On the recommendation of *ad hoc* Committee this scheme has been included in the draft outline of Five Year plan and a desert afforestation Research Station at Jodhpur has been established to deal with this problem of immobilization of the Rajasthan desert under the aegis of Forest Research Institute Dehradun.

14. The destructed and over exploited Jagir forests of former Rajasthan came under the control of the Forest Department on 1st Feb. '49 with the promulgation of Jagirdars Abolition of Powers Ordinance. All these forests are now worked in the same manner as Khalsa forests. The Jagirdars get all the revenue of the forests after deduction of 35 per cent as management charges.

15. In Jodhpur Division, forest areas belonging to the Jagirdars of Raipur, Sumel, Babera, Bar and Brontia and some of the Jagirdars of Jaswantpura, are managed by the Forest Department. There are different agreements with different Jagirdars as regards recovery of management charges. The forests of Thikana Ghanerao are supervised by the Forest Department without any charge.

16. There is no control of Forest Department over the Jagir Forests of other units like Jaipur, Alwar, Bharatpur and Karauli.

17. Some of the forests of progressive States like Jodhpur, Udaipur and the retroceded areas from Ajmer etc. are worked under proper working plan and tentative working schemes, (which need revision now) while the remaining forests are worked in an unsystematic way without any plan for sustained yield.The Government has sanctioned a Working Plan Conservator and shortly we will have working plan divisions to do away with such unsystematic workings.

18. There is an ample scope of extracting oil from Mahuwa and Nim seeds but it has not so far been tried on commercial lines. There is not enough raw material for a paper mill in Rajasthan but there is an abundance of Boswellia serrata (Salar) and match sticks may be made as a Cottage Industry. A fairly large quantity of fuel and charcoal is exported annually to adjoining States of Bombay, U.P. and Ajmer because it cannot be transported economically to the interior of Rajasthan.

19. At present Katha is manufactured by old crude methods. This system can be developed on scientific lines, thereby making full use of bye-products *i. e.* catechin and tannic acid etc., which are going as waste at present. The following cottage industries can be developed in Rajasthan:—

(1) Grass (Rope making)

(2) Biri industry.

(3) Wax and honey Industry.

(4) Gum industry.

(5) Tanning industry.

(6) Hides and horns industry.

(7) Mahuwa, Nim, and Karanj oil industry.

(8) Fibre and floss industry.

(9) Miscellaneous, combs, penholders, toys, Salar packing case etc.

(10) Extraction of Khas oil.

(11) Palm Gur manufacture.

20. Besides there are many medicinal plants and herbs found in the forests a list of which is attached as Annexure V.

21. The Revenue to the Government from the forests is about 40 lacs per year.

XV. A Glimpse into Rural Areas.

1. For a proper understanding of the significant facts brought out by means of census enquiry about our brethren in the rural areas, a brief knowledge of the conditions prevailing there is essential. The following remarks which are based mainly on the author's personal knowledge and are corroborated in salient particulars by the evidence of the officers in a more direct contact with the areas and their people, though not supported by statistics, will therefore, not be out of place.

2. The high palatial buildings in big cities, furnished with all paraphernalia of luxurious living and equipped with the most modern scientific devices for making life comfortable cannot make us realise the real condition of the masses. The huge congregation of people seen in our cities with hustle and bustle of trade as well as the flow of money in currency and exchange is no index of the prosperity of the people. To understand the economic condition of the agriculturists and their dependants we have to go to their homes in the villages.

Rural Roads and Peasants' Dwellings.—3. But there are no means of communication to take you to a vast majority of these villages except rickety and jolting, slowly moving bullock-carts which give you a jerk at every 5 steps that makes your bones rattle and ache. In the hilly districts even this luxury is not practicable and you have to rest contented with surveying the distance with the aid of the camel, the ship of the desert. There are no metalled roads and you have to travel by tracks full of dust and dirt during the summer and of water and mud during the rains, you have to travel in the scorching sun, there being no welcome shade of trees on the way to afford you shelter. When at last you arrive at your destination profusely perspiring and feeling thoroughly unhappy, you find houses of mud with thatched roofs to welcome you. If continuous attention is not paid towards the repairs of these houses, they are sure to come down on the advent of rains. The roofs are leaky to a degree and it is a sight never to be forgotten to see the poor people removing their cots from the leaky spot to another. The walls of the houses are plastered with mud, lime for white washing is not available and even when available, it is a luxury which the poor people cannot afford. Even well-to-do people in the villages have to remain satisfied with a coating of cow dung mixed with red or yellow earth. The kitson or the electric lamps are things unseen and unheard of. Even the humble kerosene lamps and the lanterns are things of luxury. They use earthen lamps in which mustard or sesamum oil burns, giving a faint and flickering light which serves only to make darkness more visible. In some places kerosene oil is burnt in earthen or in tin-pots to drive out darkness from the low roofed thatched houses, but their smoke and soot fill the latter in no time and make the air unfit for inhalation. Electric fans of course there are none, even the old Punkha hung down from the ceiling is not to be seen, and for relief from the hot and close atmosphere they have to depend upon air currents and breezes, the universal fan provided by Nature herself. The only piece of furniture that you find is the charpoy which serves for a chair, a bed and numerous other things.

Sanitary Condition.—4. A raised mud platform is a necessary adjunct to a house and is used for sitting, sleeping upon and for various other purposes. There is no arrangement for fire place to warn the house in winter, nor for chimneys to draw off the smoke rising from Chula at the time of cooking food. Add to all these discomforts the dirty and highly insanitary practice of tying cattle in the same room in which these men sleep, and think of the injury to their health which the practice must cause on account of there being no arrangement for ventilation. There are no windows in the houses. The floor is Katcha on which the inmates squat. They can thus neither protect the occupiers from the awful heat of the summer of Rajasthan nor from the biting winds of the winter. If you look at the surroundings of these houses you will be simply startled. The lanes are never swept and all kinds of dust and refuse collect in them to bring them into stinking cess-pools in the rainy season. There is no system of drainage and all the dirty water from the drains of the houses is discharged into the lanes and percolates into soil. You will find manure pits close to the dwellings and sometimes even in the none too big courtyards. Near the site of the village you will find a few ponds full of dirty water, colonised by mosquitoes spreading death and disease around. The habit of the people of easing themselves on the bank of these ponds on account of water for washing their parts being within easy reach, renders them more dangerous than they would otherwise be. All the night-soil on their banks is washed off into them in the rains. The pigs wallow in them. It is this water which the cattle of the village generally drink. It is perhaps the reason why cattle diseases are so common in the villages. The village Dhobi washes the clothes in them and sometimes men also have no objection to bathe in them. And now you can realise what it means to live in such houses and among such surroundings.

Metallic Wealth.—5. There are a few ornaments the wearing of which is considered indispensable for married women. Even these are denied to some. Gold ornaments with the exception of perhaps a nose-ring are rare even among the well-to-do people. Some fortunate women have a few silver ornaments. Women of the poor have to remain contented with ornaments of bell-metal. A large number has to go without them even. The utensils used are generally earthen and those who can aford brass ones are deemed quite fortunate. A small grinding mill, the Chakki as it is called, is a necessary thing in every house; which the ladies of the household use every morning for grinding corn for their daily use. The total wealth of a villager consists of one or two bullocks, a few cheap agricultural implements and a few utensils of daily use.

Food and Raiments.—6. If you look to the food they eat, you will find that it is mostly vegetarian. The only basis of selection of food is cheapness. Maize, gram, barley and millets are their ordinary food. A gruel made of parched grain mixed with water is generally what the poor can afford to satisfy their hunger with. In order to make it palatable, they put in a pinch of salt and chillies; sugar, of course, they cannot afford to have. The cultivator may cultivate wheat and be exporting a large quantity of it out of the country but his poverty does not allow him to use it himself. Ordinarily he does not use vegetables, it is only at ceremonial occasions that this luxury is indulged in. For a man living on a vegetarian diet milk is quite essential to give sufficient nourishment. But in modern days of development the majority cannot afford to use milk or butter for their food and have to sell them and the only thing that remains to them is skimmed milk. Mr. S. Kesava Iyengar, an Indian author of eminence, in his book "Studies in Indian Rural Economics" has put the condition of the Indian peasant in a nut shell. He remarks "The rural population seemed to try to stifle appetite rather than to meet it properly, whether a commodity consumed was nutritious and health-giving was hardly considered. Many made gruel in the morning, it meant less grain consumption." An English author has also rightly stated "They do not live but they only exist". A close study of the economic position of the cultivator in India has clearly shown that the Indian cultivator is the "poorest man on the surface of the globe". You will be struck with their clothing at the first sight. In the hot weather the majority of men will present themselves clad in a loin cloth only, the children between 8 and 12 years of age with a strip of cloth which is just enough to cover their private parts and those of younger age clad in Nature's garb. In winter the number of those that have blankets or quilts is not large. Most of the males have got only a shirt and Chaddar of Khaddar and the females a wrapper and a shirt of the same material. But kindly Nature comes to the aid of these people who are poorest of the poor. The furnace of the sugarcane mill or a burning heap of cow-dung cakes and faggots, etc. provides them with its generous heat and they pass the greater part of the night basking before it. In some cases even this insufficient raiment is torn and tattered.

Medical Aid and Health—7. When they fall ill, there are no Doctors, Hakims or Vaids to treat them. There are no Health Officers to advise them on sanitary methods of living, with the result that the vitality of the people is daily decreasing and mortality is enormous. If you look at small children you will be struck with their small sunken, lacklustre eyes and protruding bellies due mostly to enlarged spleens. They look pale and unhealthy, and a majority die in their infancy. The main cause of death is malnutrition and want of sufficient nourishment in the vegetarian diet generally used.

Social Amenities—8. There are few post offices within easy reach and there is hardly one school. There are no libraries, no clubs and no society; the whole life is monotonous, prosaic, dull and full of drudgery. There is no recreation, and nothing to make life enjoyable. Life has only to be lived on account of the strong instinct to preserve it.

Their ways of Life—9. The agriculturists are not only patient and hard-working but very economical in their methods of living. The charge of extravagance levelled against them is mostly unfounded. There are a few of them who are both extravagant and imprudent but

their percentage is insignificant. Ordinarily the Rajasthani peasant is frugal and economical in his daily life, and it is only due to his economical habits of living that he has been able to drag on his miserable existence uptillnow.

Their Indebtedness.—10. In my note on the subject written in the Census of 1941, I had remarked, "That there are large numbers of hopelessly insolvent debtors in rural areas is generally admitted and we cannot regard it as making for health in the body politic that they should be allowed to remain without hope and without help. When a cultivator continuously finds that every time his harvest is ready, it is taken away by others, he naturally sees no hopeful future in life and feels life as a burden. He neither takes any interest in life nor in his profession. His physique deteriorates, his mind becomes feeble and his mental condition does not allow him to carve out a better career for himself." But since then there has been a good deal of improvement in this respect. The indebtedness has greatly been reduced due to an abonormal rise in the prices of agricultural produce and the opening of Co-operative Societies in some parts. He is no longer dependant on the Village Bania to the extent he was 10 years ago and there is a general impression that a large percentage of gold and silver sold in towns is purchased by the cultivators. The following are said to be some of the causes of poverty of the cultivators:—

1. Complete failure of monsoon, or deficient or excessive rainfall.
2. Insufficient means of irrigation, which are either expensive or managed inefficiently.
3. Low productive power of land, either due to the continued use of the same land for years or for want of good seed and manures.
4. Ignorance and illiteracy of the agricultural community, to which may be attributed the following:—
   (a) Ignorance of the usefulness of good seeds and how to obtain them.
   (b) Absence of the latest scientific methods in agriculture and improved implements etc.
   (c) Absence of economic and proper methods of irrigation.
   (d) Incapacity to find out suitable markets.
5. Extravagance on marriages and death ceremonies in some cases.
6. Litigation.
7. High rates of interest charged by the money lenders, and under pressure, buying of agricultural prod uce at a very low price, and when the same is required by the kisans re-sellingthem at a higher rate than that ruling in the market.
8. Losses due to sale of the agricultural produce at less than the cost price.
9. Insufficient stock of fodder for the animal.
10. Inability to maintain cattle at a heavy cost, in times of famine, or rendering them useless or exposing them to death.
11. Absence of Kisan and Industrial Banks.
12. Extravagance in drink and other intoxicants and narcotics in some cases.

XVI. Style of Villages.

The following extract from the 1911 Census Report of Rajputana and Ajmer—Merwara gives a vivid description of the style of villages in Rajasthan and Ajmer. The style is substantially the same even after a lapse of forty years. "The style of village varies much with the nature of the country and often with the caste and the State. On the extreme east of the Province, in the northern parts of Bharatpur among the Meos the average village lies closely packed together; a high wall with one common entrance encloses in its compound the dwellings of several different families. In the Central Tehsils, inhabited chiefly by Jats, Ahirs, and Bral mans, the houses are not so closely packed together and most of them have their own separate compounds. In the Gujar villages in the south, on the other hand, the houses lie scattered about at considerable distances. In this one State again the type of house varies from mud one-storeyed huts with flat or thatched roof, two storeyed stone houses with roofs of large slabs of red stone, found nearer

the hills. In Dholpur, on the other hand, which is very like Bharatpur in other ways, there is said to be little difference between the villages of the different castes. The houses are built of mud, or stone, and have flat roofs in some parts and sloping in others. Taking next the extreme opposite western side of Rajputana, namely Sirohi, the houses are generally closely packed together, except those of the Rebaris (the great shepherd caste) and the hill tribe of Grassia, who live in widely scattered hamlets. Again in the south in the Bhil States the Bhils in most parts live in more or less isolated huts at some distances from their neighbours, each having its own separate enclosure. In Banswara the Rebaris, and Banjaras' villages can be recognized generally by their thatched huts which are circular in shape. Houses of mud, brick, bamboo and grass are all found. In the desert States again the style of village and house varies more with the locality than the caste. In the sandy tracts the houses are more isolated and often built of reeds. In the more fertile parts and where material is available the houses are found closer together and more substantially built. It may thus be said that nearly every style of village and of house, single-storeyed, two-storeyed, flat roofed, sloping roofed, tiled, thatched, stone slab roofed, with or without compounds, standing alone or wedged closely to its neighbour, with walls of bricks reeds, mud, clay, stone, bamboo, may be found in these Provinces. But, in nearly all, the lower or depressed castes are compelled to live in either a separate quarter or outside the village altogether".

XVII. General Description of Ajmer State.

Position, Area and Boundary:—It is situated between 25° 24′ and 26° 42′ north latitudes and 73° 45′ and 75° 24′ east longitudes. Its area is about 2416·6 square miles. It is surrounded on all sides by the districts of Rajasthan, *i.e.* on the north and west by Jodhpur, on the south by Udaipur and on the east by Jaipur District.

2. Ajmer is a Part 'C' State under the Chief Commissioner, administered centrally. It is divided for administrative purposes into 3 Sub-divisions *viz.* Ajmer, Kekri and Beawar.

History of Ajmer—3. The history of Ajmer-Merwara is to a very great extent, that of Rajasthan though ever since its cession in 1818 by the Marathas to the British it remained a British Province till the attainment of Independence. It has been well said that the power who would hold India must hold Ajmer owing to its central and commanding strategic position. The fact seems to have been recognised by all the great ruling dynasties. The soil of Ajmer district has been soaked through the centuries in the blood of those contending for the possession of the fort of Taragarh and the city of Ajmer (founded at the beginning of the twelth century). In the Mughal times Ajmer was one of the recognised residences of the great Emperors and it was here that the first English ambassador to India from the court of King James I, Sir Thomas Roe, had his first audience of the Emperor Jahangir. Two other facts may be mentioned which make Ajmer famous. It contains two of the most holy objects of pilgrimage in the whole of India. In the heart of the city is the shrine of the great Mohammadan Saint, Khwaja Muinuddin-Chishti, who died in Ajmer about 1235 A.D. Seven miles to the west of the city lies the Pushkar lake whose waters are so sacred that a dip therein washes away all sins, and in Rajasthan and Ajmer State at any rate, it shares with the river Ganga the honour of being the desired resting place of a Hindu's ashes. Its great sanctity is due to the belief that Brahma here performed the Yagna. It contains one of the very few temples in India dedicated to Brahma. Coins found nearby dating back to the fourth century B.C. prove its great antiquity and it is mentioned as a sacred bathing place in the ancient epic, the Ramayan. To both these places there is a constant stream of pilgrims throughout the year.

Physiography.

Hill System:—4. The distinguishing feature of the country is the Aravalli range, the

trong barrier which divides the plains of Marwar from the high table-land of Udaipur District. The range, which commences at the 'Ridge' at Delhi, comes into prominence near the city of Ajmer, where it appears in a parallel succession of hills. The highest point, on which is perched the fort of Taragarh, rises immediately above the City of Ajmer to a height of 2,855 feet above the level of the sea. About 10 miles from Ajmer the hills disappear for a short distance, but in the neighbourhood of Beawar form a compact double range which approach each other at Jawaja, 14 miles further south, and finally meet at Kukra in the north of Todgarh in Tehsil Beawar. Thence the range gradually becomes bolder and more precipitous, till it finally terminates near Mount Abu.

Configuration and Water Shed:—5. The plateau on which the city of Ajmer stands marks the highest point in the plains of Hindustan; and from the hills which hem it in, the country slopes away on every side. The range of hills between Ajmer and Nasirabad marks the dividing water-shed of the continent of India. The rain which falls on the southern or Nasirabad side, finds its way by the Chambal into the Bay of Bengal; that which falls on the other side is discharged by the Luni into the Gulf of Cutch.

River system:—6. Owing to its position on the water-shed of the continent, the district does not possess rivers of any importance. The principal stream is the Banas, which takes its rise in the Aravalli range, about 40 miles north-west of Udaipur, and enters the Ajmer District at the extreme south-east corner. During the rains, this river is frequently in flood. Besides the Banas there are four streams, the Khari Nadi, the Dai Nadi, the Sabarmati and the Saraswati. All are mere rivulets in the hot weather but become torrents in the rains, neither they nor the Banas are used for the transport of produce. The Khari Nadi rises in the hills near the village of Birjal in the Merwara sub-district, and after forming the boundary between former Udaipur State and Ajmer for a short distance, falls into the Banas. The Dai Nadi, flowing from west to east across the Ajmer District, is arrested in the early part of its course by the Nearari embankment. Thence it flows by Sarwar, belonging to Kishangarh and eventually also empties itself into the Banas. The Sabarmati rises near Bisla tank in Ajmer, and after flowing through and fertilizing the Ajmer Valley, takes a sweep northwards and meets with the Sarswati, which carries the drainage of the Pushkar valley, and the united stream from this point until it falls into the Rann of Cutch is designated the Luni, or salty river, and it is on this stream that Marwar chiefly depends for what fertility it has.

Forest:—7. The forests in Ajmer State are of three classes: State Forests, which are taken up under the Forest Regulation (VII of 1874), covering an area of 142 square miles: Protected forest; and Village Estate Commons. The last two are insignificant, and are voluntarily placed under local conservancy by their proprietors. About 947 acres are appropriated for nurseries and plantation operations. Generally speaking, the hills in Ajmer are denuded of trees, the denudation having been effected before British occupation. The general supervision of the forests is in the hands of an officer of the Provincial Forest Service, who is under the control of the Chief Commissioner of Ajmer State and of the Assistant Commissioners.

8. The forest produce consists of grass and fuel. The villagers from whom the land was acquired are allowed to take as much grass as they require and fuel in certain quantities free of charge. They are also entitled to free grazing to a limited extent. The supply of fuel and fodder is sufficient for local needs. In times of famine the forests are thrown open for grazing and for the removal of dry wood for fuel at nominal rates. Forest fires occur occasionally in the hot season.

Fauna:—9. An occasional tiger is to be met with in Merwara (Beawar Sub-division) while leopards are found in the hills from Nag Pahar to Dewair, as also are hyenas. Wolves are rare: wild hogs are found in most of the old feudal (Istimrari) estates, and hog-shooting is a favourite amusement of the Rajputs. 'Black buck' (Antelope cervicapra), 'ravine deer' (Gazella bennetti),

and Nilgau (Boselaphus tragocamelus) are met with in Ajmer Sub-division. A few samburs (Cervus unicolor) are to be found in the hills in this Sub-division. As regards small game, the great Indian bustard is to be seen in Ajmer Sub-division. The florican is a visitor during the rains, geese, duck, snipe and quail are found in the cold season; and hares, sand-grouse and grey partiridges at all times.

Climate:—10. The water supply is scanty. As the State lines on the border of the arid zone of Rajasthan, outside the full influence of the monsoons, the rainfall is very precarious. The climatological features of the area are represented by Ajmer and network of about eight rain-recording stations. (Vide Annexure IX (a).

11. The climate is, in general, healthy. The winter is cold and bracing and hoarfrost occasionally covers the ground. The mean daily maximum temperature in January at Ajmer is 73°F and the mean daily minimum 46°F, but in individual years minimum temperature below freezing point has been recorded. The lowest minimum temperature recorded in January is 27°F and in February 30°F. An inch of rain occurs during the period December to February in about two rainy days on an average.

12. March is the month of transition from the cold season to the hot weather period which extends from April to June. The mean maximum temperature in May, the hottest month of the year, is 103° F. In certain hot spells, the maximum temperature shoots up much higher and a temperature as high as 114° F has been recorded in May. Dust-storms are of occasional occurrence in May and June.

13. The onset of the monsoon takes place by about the end of June, and most of the annual rainfall which varies from 17 inches to 23 inches over the area occurs during June to September. July and August are the rainiest months of the year. The rainfall is often accompanied by thunderstorms. The maximum rainfall recorded in a day at Ajmer is 6·48 inches. Such heavy falls generally occur in association with the movement across North India of monsoon depressions from the Bay of Bengal. The fluctuations of rainfall from year to year are considerable. Ajmer had 48 inches in 1917 and only 6 inches in 1918. In July, 17 inches of rain occurred in 1917 and in 1899 only 10 cents of rain fell.

14. The monsoon generally withdraws by about the 15th of September and a period of slightly warmer weather follows with clear or lightly clouded skies and cooler nights. November is the driest month of the year.

Archaeology:—15. Outside Ajmer City and Pushkar there are few objects of archaeological interest. In the south-east of Ajmer District are remains of Hindu temples, the age of which is not known. It is possible that they date from the time of the Hindu kings of Toda Raisen, the ruins of which lie some 30 miles across the border in Jaipur territory. Baghera and Sakrani contain the better known of these remains. The fort at Bhinai is a good specimen of the fortresses built by the smaller Rajput chiefs.

Agricultural conditions including Soils.

General agricultural conditions:—16. Owing to its configuration and its position on the watershed of India, agricultural conditions in Ajmer State are precarious. The soil is generally shallow and the rocky strata are near the surface. The soil is composed of a natural mixture of one-third stiff yellow loam, and two-thirds sand consisting of disintegrated mica schist and felspar. Alluvial soil is found only in the beds of tanks and clay is rare. Carbonate of lime is common in certain areas. The Pushkar valley contains deposits of rich soil. Ajmer is flat and Merwara (Beawar Sub-division) hilly.

17. The rainfall is uncertain and its frequent failure makes the State peculiarly liable to scarcity and famine. The dry-crop area, though extensive, is uncertain in out-turn and

little considered. The success of the harvest depends in a large measure upon artificial irrigation from the tanks and wells, with which the country is covered wherever the local conditions have made it possible. The chief cultivating castes are Gujars, Jats, Merats, Rajputs and Rawats. Of these the Jats are by far the best agriculturists.

Principal Crops—18. The principal crops are maize, jowar (great Indian millet), barley, cotton, oilseeds, bajra (buerush millet) and wheat. Cultivation of fibres, spices and other subsidiary crops is very restricted. Sugarcane is also cultivated in the Pushkar valley. Fruit and vegetable production is confined to the neighbourhood of the principal towns.

Sowing, manuring and rotation of crops—19. The autumn crops are generally sown in July and reaped in October and November. The Spring crops are sown in October and are reaped in March and April. Owing to the poverty of the soil and the exhaustion of irrigated lands, which are frequently cropped twice within the year, heavy manuring is essential and many cattle are kept for this purpose. Ashes, house-sweepings and vegetable manures are also used. Night-soil is in considerable demand in villages near towns. Crops are varied on a system based on the results of local experience. For example, a cotton field is left fallow in the ensuing harvest, when it is sown with maize in the next autumn after which it is left fallow during the spring before cotton is again sown in the autumn. Agricultural implements are of the usual primitive description.

Land tenures—20. In Ajmer State, land is held under two systems, (a) Permanently settled estate system and (b) the temporarily settled estate system. As these expressions themselves suggest, the difference between the two systems lies in the character of the settlements of land revenue. Under the former, land-revenue is fixed in perpetuity and is not subject to any change, while in the latter it is revised at regular intervals. The distinction between these two systems of land tenure is drawn by naming the area held under the permanently settled system as 'Istimrari' and terming the land tenure under temporarily settled system as 'Khalsa'.

(a) Permanently settled estate system.

21. These Istimrari estates of the State number 346 with an area of 1280 sq. miles. The origin of these estates may be traced to the Moghul period. These were lands held in estates or baronies by feudal chiefs, originally under an obligation of Military service, and also liable to various other feudal incidences. The grants were life grants, but, like all similar tenures, they tended to become hereditary. Before the Maratha Rule in the country, these estates paid no revenue, but they rendered military service to the ruling power. But the Marathas found it impolitic to enforce condition of military service and they assessed a sum upon each estate in lieu of such service. When the District of Ajmer was taken over by the British Government from the Marathas, the former fixed assessments on these estates in perpetuity, limiting the demand of the estates to the amount which had been assessed by the Marathas nearly a century before. This fixed assessment has not been revised ever since and the Istimrardars are paying the same amount which their fore-fathers paid to the Marathas. The Istimrardar occupies the position of a feudal chief and is the proprietor of all lands within his estate. The persons occupying or cultivating lands in these Istimrari estates are mere tenants with no proprietory interest, whatsoever in the land.

(b) Temporarily settled estate system.

22. As already stated above, under this system are classed Khalsa and Jagir tenures of the State. Lands outside the feudal baronies was termed as Khalsa or the "Private domain of the Crown". Before the introduction of mauzawar system in 1849, the State was the owner of all lands including the common lands of the village. From ancient times, however, it has been the custom in the Khalsa land of Ajmer that those who permanently improved land by sinking

wells and constructing embankments for the storage of water acquired, thereby, certain rights in the soil so improved. These rights are summed up and contained in the term "Biswadari", signifying "heritable land". A cultivator who has thus expended capital was considered protected from ejectment as long as he paid the customary share of the produce of the improved land and he had a right to sell, mortgage or make gifts of the well or embankment which has been created by his capital or labour. The transfer of the well or the embankment carried with it the transfer of the improved land. The biswadar has thus come to mean owner. Such was the tenure of the Khalsa land of Ajmer till the year 1949 when village boundaries were for the first time demarcated and village (mauzawar) settlement was introduced. This transformed the cultivating communities of the Khalsa, each member of which had certain rights in improved land, but who, as a community, possessed no right at all, into bhayachara proprietory bodies. The essence of mauzawar system is that a defined area of land—that which is enclosed within village boundaries—is declared to be the property of the village community and the community consists of all those who are recorded as owners of land in the village.

23. The Khalsa land, again, might be alienated by the State, either as endowment of a religious institution, or as a reward for service to an individual and his heirs. Such grants, when they comprised a whole village or half a village, were termed Jagirs. A Jagirdar is an assignee of land revenue. But he is, except where the cultivators were located previous to the grant, also a landlord or proprietor of all waste and un-cultivated lands, as well as of all cultivated land dependant alone on the rainfall (barani), while in lands protected by wells or other irrigation works, the cultivator had been declared full proprietor, subject, of course, to payment of the usual assessment, either in cash or kind to the Jagirdar.

24. Thus, in Jagir villages also, there are Biswadars. These petty owners cultivate their own land and pay land revenue to Jagirdars.

25. In Khalsa and Jagirs the Biswadars are, therefore, peasant proprietors who generally cultivate their own land and pay the land revenue assessed on them in cash to Government in the former and in cash or kind, but mostly in kind, to the Jagirdar—the assignee of the land revenue—in the latter,

26. In the district of Ajmer there are 747 villages with an area of 2,301 Sq. miles. Of these 346 villages with an area of 1,280 Sq. miles have been permanently settled. These villages include 6 minor Istimrari villages, *i. e.* (1) Rajosi, (2) Kotri, (3) Ajesar, (4) Noser (5) Karel, and (6) Khare-Khari. The remaining 401 villages with an area of 1,021 Sq. miles have been temporarily settled. There is no village under Ryotwari or any other system.

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PART II—NATURAL DIVISIONS.

A. EAST RAJASTHAN PLAIN DIVISION

I. Composition.

This Division is composed of the following 8 districts: Jaipur, Jhunjhunu, Sikar, Sawaimadhopur, Bharatpur, Alwar, Tonk and Bhilwara.

II. Position, Area and Boundary.

It is situated between 25° 41′ and 27° 12′ north latitudes and 74° 24′ and 77° 14′ east longitudes. Its area is about 30,382.6 square miles. It is bounded on the north by Gurgaon District of Punjab, on the east by Agra and Mathura Districts of Uttar Pradesh and Gwalior of Madhya Bharat, on the south by Bundi and a portion of Udaipur Division and on the west by Bikaner.

III. Physiography.

(a) *Jaipur, Sawaimadhopur, Sikar and Jhunjhunu Districts comprising the former Jaipur State.*

Configuration:—1. The country is for the most part fairly level and open. The centre is an elevated table land of triangular form from 1,400 to 1,600 feet above sea level. The eastern side consists of ranges of hills running north and south along the Alwar border, while the apex is formed by a broken chain of hills, a portion of Aravalli range, which runs from near the Sambhar lake in a north-easterly direction as far as Khetri. These hills attain a considerable height, the loftiest peak being Raghunathgarh 3,450 feet above the sea and form a natural boundary between the sandy desert tract of shekhawati to the north, and the fertile plains of Jaipur proper to the south and south-east. West-ward from the capital, the country rises gradually towards Kishangarh border, consisting in great measure of broad, open, treeless plains. In the extreme south the hills reappear. The south-eastern portion has many ranges of low hills.

Rivers:—2. The Banas, the principal river of Jaipur flows for about 110 miles through, or along the border of the former Jaipur State. It has numerous tributaries, such as the Dain, the Manshi, the Dhil, the Galwa and the Morel. The Chambal merely forms the south-eastern boundary of the division separating it from Kotah District of Rajasthan and Gwalior of Madhya Bharat. The Banganga is, for about 90 miles, a river of Jaipur. Among other rivers are the Bandi, a tributary of Mashi, the Dhund and the Khari, tributaries of the Morel, the Aman-i-shah which supplies Jaipur City with drinking water, and joins the Dhund; the Mendha which flows into the Sambhar lake; the Sabi which flows north-east into Alwar, and thence through Kot-Kasim, into Gurgaon (Punjab); and lastly the Kantli which after a northerly course of some 60 miles through Shekhawati loses itself in the sand just within the Bikaner border. The Rupnagar after a north-easterly course empties itself in the Sambhar lake.

(b) *District Bhilwara including Shahpura Tehsil.*

Configuration:—3. The country is for the most part flat, open and treeless and contains much pasture land.

Rivers:—4. In the north are two small rivers, the Khari and the Manshi, which flow from west to east, near Phulia, and eventually join the Banas river north of Deoli. In the central portion flows the Kothari which rises from the hills near Dewair in Udaipur District and joins the Banas.

(c) *Bharatpur District.*

Configuration:—5. In shape Bharatpur District is an irregular quadrilateral, narrowing from south to north, with spurs projecting into Alwar and Agra Districts. The general aspect

is that of an alluvial plain, fairly well wooded and cultivated, with detached hills in the north and low narrow ranges on part of the western and northern frontiers. The highest hill in the district is in the west near Alipura 1,357 feet above the sea. The country is open and level on the north, but elsewhere consists for the most part of low hills or ravines. A range of sandstone hills runs from near Dholpur in a south-westerly direction, attaining in places an altitude of 1,171 feet above the sea; these hills as well as those farther to the west are mostly bare of vegetation, and rocky. The tract along the Chambal is termed the Dang and deeply intersected by ravines, some of which are 1,000 feet deep and extend from 2 to 4 miles into the interior.

Rivers:—6. The river Chambal forms the southern boundary, separating the district from Gwalior. The river Chambal flows south-west to north-east along the entire southern and eastern borders of Dholpur Sub-division. The Banganga river enters this Sub-division in the north-west corner and flows east for about 40 miles. Its bed is about 40 feet below the surrounding country. The Parbati rises in Karauli, close to the western border and after a sinuous north-easterly course of about 60 miles, falls into the Banganga. It has two small tributaries, the Mendka and the Mendki both of which rise near the sandstone ridge, and flow north for 18 or 20 miles. The Parbati and its tributary dry up in the hot season, leaving occasional deep holes. The Principal rivers are the Banganga, the Gambhiri, the Kakand and the Ruparel. They usually cease to flow about two months after the rainy season is over.

(*d*) *Alwar District.*

Configuration:—7. It is in shape a fairly regular quadrilateral, with its greatest length from north to south about 80 miles, and the greatest breadth of about 60 miles; ridges of rocky and precipitous hills, for the most part parallel, are a feature observable throughout the whole district, which, however, is generally open to the north and east. The main range, a continuation of the Aravallis, runs due north and south through the centre of the territory from Mandawar, part of Alwar City, to the Jaipur boundary a distance of about 56 miles. The hills on the west border rise boldly abruptly from the plains on either side presenting an almost impassable wall of rock, and they contain the highest peak in the district (2,542 feet above the sea.)

River system:—8. The principal river, the Sahibi (or Sabi) rises in Jaipur and after flowing in a general north-easterly direction for about 50 miles in, or along the borders of the Alwar District passes into the Kot-Kasim Tehsil of Alwar District and thence into Gurgaon (Punjab). It dries up after the rains, its bed is too sandy for cultivation, and owing to its high banks, it is useless for irrigation. The Ruparel river rises in the Thana Ghazi hills, flows east through Alwar for about 50 miles till it enters Bharatpur District, where it is immediately held up by the Sikri Bundh.

IV. Forests.

(*a*) *Jaipur District.*

1. Forests are mainly found in Tehsils of Jaipur and Kishangarh. Forests in this district are divided into "reserved" demarcated and undemarcated forest. Reserved forests are located mostly in the Jaipur Tehsil. The hill ranges are either bare or contain Anogeissus pendula, where destruction of the forest has not been severe. Mostly fuel species are met as Ber, Dhak, Dhokra Khair, and Pipal. Petty timber like Babul, Jamun, Shisham are also found. Right holders are allowed to graze their cattle free of charge and others have to make payment.

(*b*) *Tonk District.*

2. The forests consist mainly of scrub jungle with Anogeissus pendula as the main species on the hills and scattered Boswellia Serrata. Other species found on the plains at the base of the hills are prosopis spicigera, capparis aphylla, Acacia leucophloea, etc. These forests have suffered badly from over grazing. Prosopis juliflora an exotic was introduced a few years back, it has established well.

(c) *Sawai Madhopur District.*

3. Forests of Sawai Madhopur have been demarcated . Most of the shooting blocks of His Highness of Jaipur are located in Sawai Madhopur. The principal species is Anogeissus pendula which forms more or less pure forests. Among other forests species found are Acacia catechu, Boswellia Serrata, Butea frondosa, Melia indica and ficus species. In Karauli scrub jungle exists on the bank of the Chambal. In Mandrail Tehsil of Karauli Sub-division are to be found Dalbergia Sisoo trees though they are believed not to be of natural origin. The chief industries based on forest products are toys and basket making and Khas oil.

(d) *Bharatpur District.*

4. It comprises of the former Bharatpur and Dholpur States. Forests of Bharatpur State have been demarcated. The area is 150 sq. miles which can be divided in two types—(i) hilly and (ii) plains.

(i) In the hilly tract the following main species are found: 1. Boswellia serrata, 2. Anogeissus pendula, 3. Zizyphus species, 4. Acacia leucophloea, 5. Acacia catechu, 6. Prosopis specigera and 7. Grewias.

(ii) Plain areas are termed 'Ghana areas' in local language. Forest crop is very irregular and consists of Acacia arabica, Zizyphus Jujuba, Anthoce-phalus cadamba, prosopis specigera and undergrowth of Salvadora parsica, etc.

5. Bark of Babul is used as a tanning material. Gum of Babul is used locally in preparation of *ladoos* and pasting purposes. Honey and wax are extracted out of forest on contract system fetching a meagre revenue of about Rs. 180 per annum. They are mostly consumed locally in Ayurvedic medicines. Babul and Dhau are the main timber species, used to meet the domestic requirements of local people.

6. Among grasses, Khas (Vetiveria Zizianoides) grows in wild state all over the areas of agriculture and forest of Bharatpur and Dholpur and is a main source of revenue. Nearly 15,000 Mds. of roots of Khas are annually extracted out of which 2/3 is consumed in the distillation of oil and the rest is either utilised in preparation of Khas tatties or exported. Grazing is heavy all over the area and fetches a good deal of revenue.

(e) *Alwar District.*

7. Covering an area of 402 Sq. miles, the forests of this district consist of "Rundhs" or grass preserves or Banis or wooded areas, and are to be found mostly in the hilly country in the south-west. Climate is characterised by intense heat and excessive dryness during the hot weather months when temperature rises to 120° F. and hot winds blow from the west. The cold weather is short, the minimum temperature in mid winter being 32° F. Forest can be divided in following zones:—

1st Zone.—occupies the summit and higher slopes. Boswellia serrata is the predominating species associated with small bamboo, Bauhinia, Grewia pilosa, Acacia catechu, etc.

2nd Zone.—exists on the slopes of hills extending to the foot of the slopes. Main species are Anogeissus pendula mixed with Khair, Salar, Godal, bamboos, etc.

3rd Zone.—occupies the level lands at the bottom of the valleys where the principal species met with are Butea frondosa, Khajur, Khair, bamboos, Jamun, Amaltas, Semal, Bahera, etc.

8. The growth in the valleys and near Abadi is lopped heavily for fodder for buffaloes, sheep and goats. One does not come across a single chila (Butea frondosa) tree which has not been lopped for fodder to buffaloes. Grazing is one of the chief items which fetches bulk of revenue. Other items fetching revenue are firewood, bamboos, Katha, honey, wax, fruits, etc. Forests are full of medicinal plants and herbs like (Chitrak) plumbagozeylanica, (Khatunia) Rhus species (Gugal), Commiphora mukul, (Ratti) Abrus precatorious, (Gokhru) Tribulus terristris, (Koli Kanda) Urginea indica, (Kouch) etc. Revenue from the forests of Alwar is about 2·5 lacs.

(*f*) *Jhunjhunu district.*

9. Due to increase in human population and domestic animals (Cattle, sheep, and camels) the destruction of trees, shrubs and grasses has been more rapid than it could be replaced by nature, resulting in blowing of sand through the agency of wind and depositing it in the fields, making them unfit for economic growth of crops. Spreading of desert from north to south is thus marching very speedily. As mentioned in Part I of this Appendix a three year scheme to check this march of desert by wind and to get suitable varieties of plants to increase the fodder supply was considered in the year 1949 by the Advisory Board of the Indian Council of Agriculture Research, New Delhi. Experimental plantation was started near Shekhavati but later on had to be stopped because the council stopped to give any more funds. However efforts are being made to include this in the Immobilisation of Rajputana desert scheme.

(*g*) *Sikar District.*

10. The position of forests is similar to that of Jhunjhunu district. The species met with are Salvadora oleiodes, Capparis aphylla, Calotropis gigantes.

(*h*) *Bhilwara District.*

11. There are a number of grass *Birs* distributed all over in this district containing a variery of grasses like Cymbopogon martinii, Apluda aristate, Hetero pogon contortus, Andrpoogon faveolatus, etc. The following trees are found growing in the *Birs*. 1. Acacia leucophloea 2. Acacia arabica. 3. Prosopis specigera, 4 Caparris aphylla, 5. Zizyphus, etc.

12. Some of the tehsils like Mandalgarh and Badnore have got some forests. The country is full of rock out-crops. The forests mainly occur on hills, plains being mostly barren with some scrubby vegetation among the few Babuls and Khejras. The wooded area can be divided under the following heads:—

(i) Hill type—Predominating species being Salar, Godal and Dhokra.
(ii) Ravine and valley type —Main Species are Dhokra, Euginea, Terminalia, Acacia, etc.
(iii) Plain type—There is scrubby growth of Zizyphus along with Dasui (Rhus Mysorensis) and scattered, (Babul) Acacia arabica, (Khejra) Acacia catechu, (Khejri) Prosopis specigera, etc.

3. The main marketable products are fuel and charcoal. The nearest markets for the products of the forest of Badnore are Beawar and Ajmer

V. Climate, Temperature and Rainfall

1. The characteristic feature of the climate of the area is the heat and the low rainfall though the aridity is less than in West Rajasthan. The mean annual rainfall varies between 16 inches in Alwar and Jhunjhunu to 22 inches in Jaipur, 25 inches in Bharatpur and Bhilwara to 31 inches in Tonk. The year may be roughly divided into three seasons, the cold season hot season, and the rainy season.

2. The cold season extends from December to February when the mean maximum temperature at Jaipur ranges between 73° F. in January to 77° F. in December and February. The mean minimum temperature is 48° F. in December, 47° F. in January and 51° F. in February.

Temperatures as low as 28° F. have been recorded in Jaipur in each of the months January and February. Such low temperatures generally occur when the region is in the grip of a cold wave in the rear of the winter disturbances which travel eastwards across North India at this time of the year. The normal rain fall during this period is very small though in certain years as much as 2 inches of rain have been recorded in one or other of these three months.

3. By about the middle of March, the temperatures start rising and the hot season prevails during the period April to June. The mean daily maximum temperature in Jaipur is 106° F. in May and 103° F. in June, and mean minimum temperature 77° F. and 80° F. respectively. In individual years, the day temperatures have shot up to 118° F. and a temperature as high as 116° F. has been recorded in Jaipur even in July. During this season winds blow with great force from the west, carrying sand in their wave. But the atmosphere is dry and the nights are, therefore, a little tolerable. Dust-storms are experienced in May and June.

4. The monsoon sets in, by about the end of June or the beginning of July and continues for about two months with intermittent breaks. As in most other parts of India, the major portion of the annual rainfall occurs during this period. But the rainfall is highly variable from year to year, and there have been years in which no rain at all has occurred at Jaipur during the whole of August. The variability of the rainfall can be judged from the fact that at Jaipur the annual rainfall in the wettest year has been 55 inches and that in the driest year only 5 inches compared to an average of 24 inches. In certain years, in association with cyclonic storms from the Bay of Bengal crossing the coast and moving across North India, very heavy rain occurs and as much as 7 inches of rain in a day has been recorded at Jaipur in the months-August and September.

5. With the withdrawal of the monsoon by the middle of September, the rainy season comes to an end, and no rain is generally to be expected in October and November though in one year a fall of 4 inches and 50 cents of rain in one day has been recorded at Jaipur in the month of October. November is the driest month of the year with practically clear skies and the cold seasons sets in by about the middle of this month.

6. Climatological data for Jaipur and rainfall of selected stations are given in Annexure IX-(b)

VI Archaeology.

Jaipur, Sawaimadhopur, Sikar and Jhunjhunu Districts comprising the former Jaipur State:—

Among places of archaeological and historical interest may be mentioned Amber, Bairath, Chaksu, Dausa, and the fort of Ranthambhor. At Ambhheri in the Baswa Tehsil are some interesting old places and at Toda Rai Singh in the south-west is another old palace ascribed to a Sesodia Raja Rai Singh (in the seventeenth century).

Bharatpur District.

2. The principal places of archaeological interest are Bayana, Kaman, and Ruphas. There are also some fine specimens of Jat architecture of the eighteenth century at Deeg.

Dholpur Sub-Division.

3. There is not much of archaeological interest in this Sub-division. South of the town on the left bank of the Chambal is a very old fort, which since about 1540, has been called Shergarh after Sher Shah, who much enlarged it. It is now crumbling away. Some mosques and tombs of the sixteenth and seventeenth centuries stand in the vicinity of Dholpur and the remains of a palace, built about 1617 for Shah Jahan, lie 3 miles south-east of the town of Bari.

VII Agricultural Conditions Including Soils.

(a) *Jaipur District.*

The soil in the immediate neighbourhood of Jaipur city and to the west and north is generally sandy. To the east of the capital and in the southern part, the soil is for the

most part either black cotton or a rich alluvial loam. About 46% of the total area, *i.e.* 1,839,000 acres are Khalsa and the rest *i.e.* 2,156,000 acres are Non-khalsa. The same ratio exists between the reporting and the non-reporting areas in the district. About 1,739,000 acres are under cultivation of which 193,000 acres have irrigation facilities. The important crops grown are Wheat, Barley, Gram, Jowar, Bajra, Arhar, Moong, Ground-nut and Tobacco.

(*b*) *Sawai Madhopur District.*

2. The classification of soil is as follows:—

(i) Clay Loam—found in Nadoti Tehsil.

(ii) Sandy Loam—found in Gangapur and Karauli Tehsils.

(iii) Black Loam—found in Khandar and Sawai-Madhopur Tehsils.

(iv) Yellow Loamy soil—found in Mahuwa, Toda Bhim, Hindaun and Chonsala Tehsils.

(v) Strong Loam (*Light yellow*)—found in Hindaun Tehsil

(vi) Loam (Light black) Soil,—found in Malarna Chor Tehsil.

The annual rainfall is about 25″. 60% of the total area, *i.e.* 1,570,000 acres are Khalsa and the rest *i.e.* 1,046,000 acres are Non-khalsa and the same is the ratio of the reporting to the non-reporting area. About 1,000,000 acres are under cultivation and the principal crops are Wheat, Jowar, Bajra, Maize, Rice, Barley, Gram, Moong, Sesamum, Ground-nut, Rape, Mustard and Sugar-cane. About 144,000 acres, out of the cultivated area, are under irrigation.

(*c*) *Bharatpur District.*

3. The soil varies from sandy loam to loam and clay-loam. The soil of one half area of the district in the south-west, comprising of Baseri, Bayana and Weir Tehsils, is of sandy loam type, 1/6th part in the central region comprising of Rupbas, Nadbai and Bharatpur Tehsils is of loam type and 1/3 area in the north-east, comprising of Deeg and Kaman Tehsils is of clay loam type. The slope of the district is towarde north-east. The problem of saltish water is too noticeable in the whole of the district. The normal annual rainfall is about 25″. 1,838,000 acres *i.e.* 94·2% of the total area is Khalsa and the rest is Non-khalsa. The whole of the district is reporting. About 1,050,000 acres are under cultivation and the important crops are Wheat, Jowar, Bajra, Barley, Gram, Arhar, Moong, Sesamum, Rape, Mustard, Tobacco and Rice. 248,000 acres of the cultivated area are under irrigation, which is about 22% of the cultivated area.

(*d*) *Sikar District.*

4. The soil is mainly sandy with more sandy on the western side and continuing to be less sandy as we move to the east. In the eastern part *i.e.* in tehsil Neem-ka-thana, sandy loam soil is also found. The average annual rainfall is about 15″. Of the total area about 136,000 acres *i.e.* 7% is under Khalsa and the rest is Non-khalsa. And 42.8% of the total area, *i.e.* 833,000 acres are the reporting ones and the rest non-reporting. The important crops grown are Jowar, Bajra, Moong, Barley and Gram.

(*e*) *Tonk District.*

5. The soil is good with sufficient rainfall, which is 30″. The soil may be divided into (i) the dark series, of which there are two varieties, the black triable soil known as Kali found in Toda Rai Singh Tehsil and the other is black clay type occurring in the Malpura Tehsil, (ii) the black yellow soil is found in Tonk, Niwai and Uniara Tehsils, (iii) the clay soil is found in Aligarh Tehsil. 799,000 acres are under Khalsa area; they constitute 45% of the total area of the district. 71·5% of the total area *i.e.* 1,269,000 acres is the reporting and the rest non-reporting. Of the total cultivated area about 9·5% *i.e.*, 90,000 acres are under irrigation which is done mostly by means of wells. Important crops grown are Wheat, Barley, Gram, Jowar, Bajra, Sesamum, Sugarcane and Cotton.

(f) *Jhunjhunu District.*

6. The soil is sandy in the whole of district and rainfall is also scanty, about 10". Almost all the area is Non-khalsa, only 7,000 acres *i.e.* 0·4 % of the total area, is Khalsa and about 25% of the total area, *i.e.* 760,000 acres, is reporting while the rest is non-reporting. The total cultivated area is 1,109,341 acres. The important crops are Bajra, Gram and Moong. About 4% of the total cultivated area *i.e.* 45,000 acres are under irrigation.

(g) *Alwar District.*

7. The soil of the district can be classified in the following types:—

(i) Sandy soil in the north-western part, consisting of the tehsils Behror, Bansur, parts of Mandawar and Tijara Tehsils.

(ii) Sandy loam type, in the central part consisting of Kishangarh, and a portion of Tijara and Bansur Tehsils.

(iii) Loam soil in the south-eastern part consisting of Alwar, Thana Gazi, Rajgarh and Lachhmangarh Tehsils.

8. About 86% of the total area, *i.e.* 1,838,000 acres are Khalsa and the rest *i.e.* 284,000 acres are Non-khalsa. About 95% of the area i.e. 2,014,000 acres are reporting and the rest i.e. 108,000 are non-reporting, 1,145,000 acres are under cultivation of which about 290,000 acres have irrigation facilities. The important crops grown are Wheat, Barley, Gram, Bajra, Moong, Urad, Rape and Mustard.

(h) *Bhilwara District.*

9. The classification of the soil is as follows:—

(i) Sandy Loam occurs in the northern part of the district constituting the tehsils Asind, Hurda, Arwar and Phulia.

(ii) Red Podsolic with gravels occurs in the western and central part covering Badnor, Kareda, Raipur and Banera Tehsils.

(iii) Black Cotton Soil occurs in the south-west part covering Sahadan, Mandal and Bhilwara Tehsils.

(iv) Black Loam - the eastern part, consisting of Mandalgarh, Kotri, Shahpura and Jahazpur Tehsils has the soil of Black Loam type.

10. Rainfall in the district is fairly good, that is, about 30" normally. About 1,100,000 acres, that is 46% of the total area is Khalsa and the rest *i.e.* 1,300,000 acres is Non-khalsa. Almost the whole of the district is reporting. The cultivated area is about 366,100 acres and the important crops grown are Wheat, Jowar, Maize, Barley, Gram, Sesamum and Cotton. About 42% of the cultivated area *i.e.* 173,000 acres are under irrigation.

B. RAJASTHAN DRY AREA DIVISION.

I. Composition.

This Division consists of the following 9 districts:—Jodhpur, Barmer, Jalore, Pali, Nagaur, Jaisalmer, Bikaner, Ganganagar and Churu.

II. Position Area and Boundary.

It is situated between 24° 37′ and 27° 42′ north latitudes and 69° 30′ and 72° 42′ east longitudes. Its area is about 75,309·5 square miles. It is bounded on the north-west by Bhawalpur (Pakistan), on the south by Palanpur (Bombay State) and Sirohi District and

Rann of Cutch, on the south-east by Udaipur District, on the west by Sind (Pakistan), and on the east by Ajmer State and Jaipur and Sikar Districts.

III Physiography.

(*a*) *Jaisalmer District.*

Configuration.—1. The country is almost a sandy waste forming part of what is known as the Great Indian Desert. In the neighbourhood of Jaisalmer town the soil is very stony and numerous low rocky ridges and hard undulating plains occur; but with this exception the general aspect is that of interminable sea of sand-hills of all shapes and sizes, some rising to a height of 20 to 200 feet and being sometimes from two to three miles in length. Shifting sands locally termed Dhorians are common. The villages are few and far between and sparsely populated.

Rivers.—2. A small stream called the Kakni rises near the village Kotri, 17 miles south of the town, and after flowing first in northerly and next in a westerly direction, forms a lake called the Bhuj Jhil; in years of heavy rainfall it deviates from its usual course and instead of turning to the west continues north for about 12 miles till checked by the recently constructed Daiya Dam.

(*b*) *Jodhpur, Pali Nagaur, Jalore and Barmer Districts comprising former Jodhpur State.*

Configuration:—3. The country is sterile, sandy and inhospitable, but improves gradually from a mere desert in the far west and north to comparatively fertile and habitable lands in the north-east and south-east in the neighbour-hood of the Aravalli hills. The 'great desert' forming the whole of Jodhpur Sind frontier, extends from the edge of the Rann of Cutch beyond the Luni river north-ward.

Hill System:—4. Scattered over the district are numerous isolated hills varying in height from 1,000 to 2,000 feet above the sea, and several small ranges, offshoots of the Aravallis, are to be found in the south, notably the Sunda hills (Yaswantpura) where a height of 3,252 feet is attained.

5. The Aravalli hills form the entire eastern boundary of the division the highest peak in this division being in the south-east (3,607 feet above the sea). These hills are fairly well-wooded, especially on the Jodhpur or western side where the slope is more abrupt.

River System:—6. Rivers play a very subordinate part in moulding the surface features of the country. The only important river is the Luni; it has several tributaries, the chief being the Lilri, the Raipur Lilri, the Guhiya, the Bandi, the Sukri and the Jawai on the left bank and the Jojri on the right, but none of them is perennial. The Luni or salt river rises in the hills south-west of Ajmer city. It is for the most part merely a rainy weather river and in the hot months, melons and the singhara nuts are grown in considerable quantity in its dry bed.

(*c*) *Districts Bikaner, Ganganagar and Churu.*

Configuration and Hill System.—7. The surface of the country is for the most part covered with undulating sand hills. The general aspect is dreary and desolate with Sand hills, varying in height from 20 to 100 feet with the force and direction of the wind. The only rocky hills deserving the name are in the south close to the borders of Jodhpur and Jaipur and the highest of them near Gopalpura is but 1,651 feet above the sea.

River System:—8. There are no perennial rivers or streams. The Kantli rises in the hills near Khandela (in the Jaipur District) and after a northerly course of some 60 miles through Shekhawati, generally loses itself in the sand just within the Bikaner border. The Ghaggar rises

in the lower slopes of the Himalayas and after traversing Patiala and Hissar Districts enters Bikaner. The water of the Ghaggar is now utilised for feeding 2 canals which form the most important irrigation works of this division.

IV. Forests.

(*a*) *Districts:—(1) Jodhpur (2) Barmer (3) Jalore (4) Nagaur (5) Bikaner (6) Churu (7) Ganganagar and (8) Jaisalmer.*

1. There are no forests in these districts only a few scattered *jors* (grass *Birs*) exist. The climate is dry and rainfall scanty. Most; of the plants which grow in this area are equipped with organs or mechanism for reducing transpiration such as reduced leaves, coating of wax, succulence, thick tomentum and to repulse or avoid the attack of herbivorous animals their enemies, vegetation becomes tough and shrubby and develops thorns, spines, prickles and bristles. Height of trees varies from 15′ to 30′. Regeneration by root suckers notably that of prosopis and Capparis is common. The commonest species in the desert are (Khejra) prosopis specigera, (Kumath) Acacia senegal, (Roira) Tecoma undulata, (Gondi) Cordia rothii, a few (babul) Acacia Species, small trees (Jal) Salvadora persida, (Kair) Capparis aphyla, (Gugal) Commiphora mukul, Euphorbia nerufolia, (Kangkera) Gymnosporamontana, (Jhau) Tamarix articulata shrubs. (Ber) Zizyphus spp., (phog) calligonum polygonoides, (Akra) calotropis procera, (Khim) Leptadania spp. etc. Grasses (Bhurut) Cenchius, (Munt) Panicum turgidum, (Dub) Cynodon dactylon, etc. climbers, (Pilwan) cocculus cebatha (Gaderia-ka-bal) Daemia extensa, etc.

2. Blatter and Hallburg toured the areas of Jodhpur and Jaisalmer Districts and they describe the formation as (i) agnatic (ii) sand (iii) gravel (iv) rock and (v) rudarel.

3. Prosopis Juliflora plants an exotic were raised and established with artificial aid of watering and tending in places like Bikaner, Jodhpur, etc., the seeds from mother trees have germinated profusely and plants have multiplied without any artificial aid.

4. On the recommendation of *Ad-hoc* Committee appointed by Government of India a Research Station at Jodhpur has been established under the aegis of Forest Research Institute Dehra Dun to study—

(a) the silviculture of various species growing already in the desert, with particular reference to their succession in the saline drifts, sandy soils and mountainous tracts; the influence of biotic factors on their development, and methods of propagation and establishment;

(b) the possibilities of introducing exotic desert species from other countries, and from other parts of India, such as Prosopis Juliflora, Agave species, etc.

(c) the edaphic factors, especially air borne salt contents and the effect of minute traces of salt in freshly deposited sands on moisture retentivity;

(d) the hydrological conditions by collection of water level data of wells through the existing revenue and other governmental agencies with particular reference to their brackish nature, and also with the help of the data collected by the Survey of India, the Central Water and Power Commission, and the Rajasthan Underground Water Board;

(e) the rainfall by setting up rain guages, where necessary, at Tehsils, Thanas, Grass farms and Special Police out-posts;

(f) Wind velocities at selected points and the nature of aeolian deposits, with the help of the organization of the Meteorological Department in Rajasthan for this purpose.

(*b*) *Pali District.*

5. Forests are situated mostly in the east and south-east of this district. The forests can be divided in three zones of vegetation.

1st Zone:—It is situated on the higher slopes. Chief species are Boswellia serrata mixed with (Godal) Odina wodier, (Karaya) Sterculia urens, (Dho) Anogeissus latifolia.

2nd Zone:—On the lower slopes chief species are Anogeissus Pendula mixed with Khair.

3rd Zone:—In the valleys and at the foot of the slopes species found are (Dhak) Butea frondosa, (Ber) Zizyphus Jujuba, (Khair) Acacia catechu, (Dhaman) Grewia, etc.

6. Right holders obtain forest produce free or at reduced rates and in years of scarcity the forests are thrown open to the public for grazing, grass cutting, and the collection of fruits and flowers.

V. Climate, Temperature and Rainfall.

1. The observatory stations Shri Ganganagar, Bikaner, Phalodi, Jodhpur and Barmer and a network of rain gauge stations illustrate the climatological features of the area.

2. The most characteristic feature of the climate of the division is its dryness and the large extremes of temperature. The mean annual rainfall which is erratic and fitful varies from about 5 inches at Jaisalmer to about 15 inches in Nagaur and most of this occurs during the monsoon period. During this season when most other parts of India get much greater amounts of rain, the rain clouds coming to this area have to pass through extensive heated sandy tracts and before reaching these plains are emptied of much of their moisture upon the ranges in Kathiawar and the nearer slopes of the Aravallis.

3. The winter is very cold and frequently the temperature falls below the freezing point and trees and vegetation are injured by frost. Due to the great dryness of the atmosphere, the change of temperature between day and night is sudden, excessive and very trying. The mean daily maximum temperatures in January, the coldest month of the year, varies from 68° F at Shri Ganganagar to 72° F at Bikaner and 76° F in Jodhpur and Barmer. The mean minimum temperature during this month ranges from 38° F at Ganganagar to 47° to 50° F at Bikaner, Jodhpur and Barmer. A temperature as low as 28° F has been recorded at Ganganagar and Jodhpur during this month and 29° F to 30° F at Barmer and Bikaner. During the winter period December to February, a little rain falls in this area in association with the western disturbances and this rain is more in the northern portion than in the south.

4. The hot season prevails from April to June or even July, temperatures of the order of 105° to 107° F prevail day after day in the months of May and June. The heat during the summer months is intense and scorching winds prevail. Shri Ganganagar which has recorded a temperature of 122° F in June is perhaps the hottest place in India and in places like Bikaner, Jodhpur and Barmer temperatures as high as 120° F have been recorded. Dust storms, some of which are violent, are of frequent occurrence.

5. Most of the rain that falls occurs in the months of July and August when the monsoon extends its way into these areas in brief spells but there have been years in which one or other of these months has been completely dry in some parts of the Division. The heaviest rainfall ever

recorded in a day is 3 inches and 90 cents in June at Ganganagar, 5 inches and 59 cents (in August) at Bikaner, 8 inches and 50 cents (in September) in Jodhpur and 5 inches 30 cents (in August) at Barmer. On the other hand, Jodhpur has recorded only 96 cents of rain in the whole of one year and Bikaner 1 inch and 14 cents. After the withdrawal of the monsoon by the first week of September, a second hot season is not uncommon extending to the end of October. The cold weather sets in by the end of November.

6. Climatological data for the observatory stations Bikaner and Jodhpur and rainfall data of selected stations are given in Annexure IX (c).

VI. Archaeology

1. The districts formed out of the former Jodhpur State are rich in antiquarian remains those at Bali, Bhinmal, Didwana, Jalore, Mandor, Nadol, Nagaur, Pali, Ranapur and Sadri, a brief description of which can be seen in the Introduction of the District Census Hand Books, of the District Concerned

Jaisalmer District.

2. Among places of archaeological interest may be mentioned the village and fort of Birsilpur (in the north-east), said to have been founded in the second century; Tanot, the first desert capital of the Bhatis, with its fort and temple dating from the eighth century; Lodorva, which has a Jain temple, said to be over 1000 years old; and Sirwa, a village about 24 miles south by south-east of Jaisalmer, which possesses a building with thirty-two pillars, said to have been erected in 320. A. D.

VII. Agricultural conditions including soils.

(*a*) *Jodhpur District.*

1. The soil of the district is generally sandy. In the western part, covering the tehsils Phalodi and Shergarh, coarse sand occurs. In Jodhpur Tehsil, alluvial fine sand is found and in Bilara Tehsil, sandy loam is found. Rainfall is scanty-hardly about 10″ in a year. Only 15% of the total area. *i.e.* 857,000 acres are Khalsa and the rest *i.e.* 4,923,000 acres are Non-khalsa, and the same is the ratio between the reporting and non-reporting areas. About 1,565,000 acres are under cultivation, of which only 3% are under irrigation. The major crop is Bajra.

(*b*) *Pali District.*

2. About 24% of the total area, *i.e.* 515,000 acres are under Khalsa and the rest, *i.e.* 1,636,000 acres are Non-khalsa, and the same is the ratio between the reporting and non-reporting areas. The cultivated area is about 594,300 acres of which only 2·5% are under irrigation. The major crops grown are—Wheat, Bajra, Maize, Barley, Moong, and Sesamum.

(*c*) *Nagaur District.*

3. The soil is generally sandy rendering Nagaur almost a desert, where only kharif crops are grown. The average rainfall is about 10″. About 23·5% of the total area *i. e.* 1,021,000 acres are under Khalsa area and the rest is Non-khalsa area. About 20·6% of the total area, *i.e.* 894,000 acres are reporting and the rest is non-reporting. About 2·0% of the total cultivated area are under irrigation.

(*d*) *Jalore District.*

4. Soil is generally sandy. The western part of Sanchore Tehsil consists of sand dunes and the rest is sandy, except in the north where it is loam type. In Jaswantpura Tehsil, the soil is sandy. In Jalore Tehsil, the soil is of clay, sand dunes loam and sandy type. Rainfall is also scanty, about 10″. About 10% of the total area, *i.e.* 279,000 acres, is Khalsa while the

rest is Non-khalsa. The same is the ratio between reporting and non-reporting areas in the district. About 1,592,000 acres are under cultivation and the main crops are Bajra, Wheat, Gram, Moong and Sesamum. Only 3·3 % of the total cultivated area *i.e.* 69,000 acres, are under irrigation.

(*e*) *Barmer District.*

5. The soil of Barmer District is generally sandy. The average rainfall in the district is about 10". Only 273,000 acres *i.e.* 4·4% of the total area is Khalsa, and the rest *viz.* 95·6% is Non-khalsa and exactly the same ratio is of the reporting and non-reporting areas. Of the total area of 6,229,760 acres, 3,311,499 acres are under cultivation Irrigated area in Barmer is nearly 7,000 acres which is a negligible part of the total cultivated area of the district. Irrigation is mainly from wells, which are generally quite deep. The principal crops are Jowar, Bajra, Moong and Sesamum in the autumn season and Wheat in the spring season.

(*f*) *Jaisalmer District.*

6. The soil is for the most part light and sandy, and as the rain sinks in and does not flow off the surface, a small rainfall suffices for the crops. Save in the few places where water can be stored, only rain crops such as Bajra, Jowar, Moong, Moth and Til are grown and the system of cultivation is rude. Camels are largely used for ploughing; the ploughs are light with which the ground is first scratched and the seed is then sown broadcast, and after it has sprouted, a few showers at long intervals bring it to maturity. No agricultural statistics are available, but a good deal of cultivation goes on during the rains and in favourable seasons (which are few and far between) the produce is said to be just sufficient for the immediate wants of the people.

Irrigation:—7. Where the soil is hard and the surroundings hilly and rocky, irrigation is carried on to a small extent from *kharins* or shallow depressions into which the rain water flows. Wheat and Gram are sown in the beds of these tanks. Wells, being on the average 250 feet in depth cannot be used for irrigation.

(*g*) *Bikaner District.*

8. The soil forms a plain of the lightest class of sandy soil, broken at short intervals by ridges of almost pure sand. The average annual rainfall is about 10". About 727,000 acres, *i.e.* 13% of the total area are Khalsa and the rest Non-khalsa, and the same proportion of area is reporting.

9. The agricultural methods employed are of the simplest description. For the kharif crops, only one ploughing is given and the seed is sown at the same time by means of a drill attached to the rear of the plough. The labour of ploughing is very small in the light and the sandy soil, and with a camel, about 37 acres can be ploughed and sown for the kharif at the rate of about 2 acres a day. More trouble is taken for the cultivation of the Rabi crop in the loamy soil. The land receives two preliminary ploughing at right angles to each other and is harrowed and levelled after each in order to keep in the moisture, the seed is sown at the third ploughing and more attention is paid to weeding than in the case of kharif crops. The principal crops are Bajra, Cereals Pulses and Sesamum.

(*h*) *Ganganagar District.*

10. Three types of soils occur in Ganganagar District.

(i) Rich loam to sandy loam soil, which is found in Hanumangarh, Ganganagar, Karanpur and Rai Singh Nagar Tehsils. This is a soft soil with a thin layer of sand at the top.

(ii) Rich hard clay to clay loam soil, which occurs in northern parts of Tehsils Bhadra, Nohar and Suratgarh and in the central part of Anupgarh Tehsil.

(iii) Poor sandy loam to poor sandy soil which occurs in the southern parts of Tehsils Bhadra, Nohar, Suratgarh and Anupgarh.

11. About 65% of the total area *i.e.* 3,302,000 acres are Khalsa and the rest *i.e.* 1,799,000 acres are Non-khalsa. The same ratio holds good for the reporting and non-reporting areas. About 1,806,000 acres are under cultivation of which 623,000 acres have irrigation facilities. The main crops grown are Wheat, Barley, Rice, Bajra, Gram, Sugar-cane and Cotton.

(*i*) *Churu District.*

12. The soil is generally sandy. Rainfall is scanty—about 10". 13·5% of the total area *i.e.* 564,000 acres are under Khalsa and the same is the proportion between reporting and non-reporting area. The major crops are Bajra, and Pulses.

Irrigation:—13. The irrigated area is very insignificant in which irrigation is mainly from wells. The water is raised sometimes by means of the Persian wheel and sometimes in leathern buckets. Shallow wells are dug yearly along the banks of rivers and the water is lifted by a contrivance called Chanch which consists of a horizontal wooden beam balanced on a vertical post with a heavy weight at one end and a small leather bucket or earthen jar at the other.

C. RAJASTHAN HILLS DIVISION.

I. Composition.

This Division consists of Udaipur, Dungarpur, Banswara and Sirohi Districts.

II. Position, Area and Boundary.

It is situated between 23° 3′ and 25° 40′ north latitudes and 72° 16′ and 74° 50′ east longitudes. Its area is about 12,048·7 square miles. It is bounded on the north by Ajmer State; on the east by Bhilwara District (East Rajasthan Plain Division), Chittorgarh District (Plateau Division) and Madhya Bharat; on the west by Pali and Jalore Districts (Dry Area Division) and on the south by Idar and Sunth Districts of Bombay State.

III. Physiography

(*a*) *Udaipur District.*

Configuration:—The whole of the mountainous country in the south-west embraces the wildest portion of the Aravalli Hills. This range enters the district from Merwara at a height of 2,383 feet above sea level and is at first only a few miles in breadth, but continuing in a south-westerly direction along the Marwar border it gradually increases in height and extends over the south western portion of the district, where it attains a breadth of about 60 miles, the highest peak is 4,315 feet above the sea at 24° 58′ N. and 73° 31′ E. In the south eastern corner a range of hills runs from Bari Sadri to the Jakam river.

Rivers:—2. The principal river is the Banas, the tributary of the Chambal. It rises in the Aravalli Hills near Kumbhalgarh and after a course generally east-by-north-east, through Udaipur, Bhilwara, Jaipur and Tonk Districts joins the Chambal in the Sawai

Madhopur District. Its chief affluents are the Berach and Kothari. The former rises in the hills north of Udaipur City and till it flows into the Udai Sagar, a lake close to the city, is usually called the Ahar-ki-nadi, after the village of that name. After leaving the Udai Sagar it flows east-by-north past Chittor and eventually joins the Banas near Mandalgarh after a total course of about 130 miles. The Kothari rises in the hills near Dewair and flows for about 90 miles almost due east across the plains before it falls into the Banas. Other rivers are the Som and its tributary the Jakam in the south.

(*b*) *Banswara District.*

Configuration:—3. The western portion of the district is comparatively open, but the rest of the country, especially in the south and east, is covered with rugged hills, rocks, scrubb jungle and wood land. A line of hills runs all through the eastern part, attaining in places an altitude of from 1,700 to 1,900 feet.

Rivers:—4. After heavy rains, the principal river, the Mahi is impassable even by rafts, sometimes for days together. It is said to have overflowed its bank in 1858, inundating the neighbouring lands and causing much loss of life. Its chief tributary is Anas, which enters the district in the south, and flows first in northerly direction, forming the boundary with Jhalod, and next west, the total course in or along the border of Banswara being about 50 miles. There are numerous minor rivers or streams, the more important being the Eran or Airav and the Chap. The country has been described as the most beautiful part of Rajasthan.

(*c*) *Dungarpur District.*

Configuration:—5. The country though fairly open in the south and east, consists for the most part of stony hills covered with a low jungle of cactus, jungle-trees and a gum producing tree called Salar (Boswellia Serrata). None of the hills attain a great height.

Rivers:—6. The only perennial rivers are the Mahi and the Som. The former divides the district from Banswara on the east. The Som rises in the hills south of Bichabhera and flows south-east till it meets the Dungarpur border, when it turns first to the east and next to the south, forming the northern boundary of the district until it is joined by the Jakam river. After a course of about 60 miles in or along the borders of Dungarpur, it falls into the Mahi, near the sacred temple of Baneshar. Among minor rivers are the Majam and Vatrak, which flow into Idar; the Bhadar, which flows south into Kadnar and eventually joins the Mahi; and the Moran, which rises in the hills south of the town of Dungarpur and joins the Mahi a little to the north of Galiakot.

(*d*) *Sirohi District.*

Configuration:—7. The country is much broken up by hills and rocky ranges. The Aravalli hills form a wall on the east, but with the exception of the Balkar peak (3,599 feet above the sea level) only the lower skirts and outlying spurs of this range are included within Sirohi limits.

Rivers:— 8. The only river of any importance is the Western Banas which flows first in a south-westerly direction till it enters Palanpur territory. It is eventually lost in the sand at the head of the Rann of Cutch. Within Sirohi limits this river is not perennial and usually ceases to flow about the middle of the cold season, leaving pools of water here and there. In addition several streams contain water for many months, such as the Jawai and the Sukri, which flows west in the Luni, and the Sukli, a tributary of the Western Banas.

IV. Forests

(a) *Udaipur District.*

1. Forests are situated on the main Aravalli range. The ground is extremely rugged in nature with precipitous cliffs and deep valleys. The ground level varies from 1500' to 4000' above sea level. The highest hill is the Jarga pahar about 16 miles in length having peaks of varying heights from 4012 feet to 4315 feet above sea level.

2. Vegetation can be classified as follows:—

(i) Hill type:—On the slopes of hills main species being Dhokra, Dhaura, Salar, Godel, Khair, Siras both white and black. On very steep hills only Salar, Godal and Karaya are found.

(ii) Plateau type:—On the plateau like formation, we see pure patches of Salar, mixed with Godal and Karaya and an under-growth of grass.

(iii) Ravine and Valley type:—In valleys soil is generally rich and there being a better percentage of water contents ever-green species appear like Euginea and terminalia, along with patches of bamboo clumps.

(iv) Teak forests:—Pure patches of teak mixed with bamboos, Albizziaz etc. are met in 'sagety' forests of Kumbhalgarh range.

3. Villagers who reside in the forests are given all the produce according to their bonafide requirements free of charge. Open forests have been left for village use, the Forest Department has no control over them, and people are at liberty to do whatever they like. Camels and goats are not allowed to enter the reserved forests. In some of the forests cattle are allowed to graze for nine months in reserved forests on payment, while in others grazing is free.

4. Katha, honey, wax, horns, hides, and skin are extracted through contractors. Gums are extracted on royalty system. Forests are full of medicinal plants and herbs like Safed Musli, Gugal, Loban, Gokhru, etc. Firewood and charcoal are exported to Ajmer and Ahmedabad. Babul experimental plantations were carried on on a small scale in different grass *Birs* with success.

(b) *Dungarpur District.*

5. More than 2/3 of the district are comprised of forests. Very little attention has been paid in the past to forest conservancy. "Due to Valra cutting (Shifting cultivation) and indiscriminate cutting of trees and burning of land, forests have deteriorated. Major portion of the forest is left as village forests. Main species found are Anogeissus pendula mixed with teak of sapling size, (Salar) Boswellia serrata (Godal) Ordina wodier, (Khair) Acacia Catechu, (Khejra), prosopis specigera (Khejri) Acacia leucophloea. Other species met in the plains are Butea frondosa, Eugine, etc.

(c) *Banswara District.*

6. Due to over fellings in the past by Bhils, and heavy grazing, forest crops and specially bamboos are deteriorating. Steps are being taken to stop irregular fellings. Main crop is teak of pole size which is felled regularly by Bhils and disposed off in Mandsaur town. Other species which are commonly found are Pipal (ficus religiosa) Haldu, (Adina Cardifolia), Salar (Boswellia serrata), Dhak (Bute frondosa), Kadamb (Anthocephalus Cadamba). Fruit trees include the mango and the Mahua (Bassia latifolia). The wild date palm is to be found in low lying ground.

(d) *Sirohi District.*

7. The former Sirohi State has been partitioned in two. A portion of it has been merged in Rajasthan and the remaining in the Bombay State. The area comprising good forests near about mount Abu has gone to Bombay State. The forest area merged in Rajasthan contain only grass *Birs*. Besides grass, honey, wax, gum and *Anwal* are other forest products on the plains. The local people use *Anwal* bark as a tanning material.

V. Climate, Temperature and Rainfall

Climate:—1. The climate is on the whole dry and healthy. The heat is not so intense as in the regions to the north and west. Also, the cold season is less cold. The annual rainfall varies from about 25 inches in the Sirohi and Udaipur Districts (excluding hill stations) to 28 inches in Dungarpur District and 34 inches in the Banswara District.

2. The cold weather period extends from December to February and the mean daily maximum temperature in January, the coldest month of the year, is 76° F in Udaipur. The mean minimum on the other hand is 47° F in Udaipur. Udaipur has recorded temperatures slightly below the freezing point during the cold season, but such occasions are rare. Generally, there is very little rain during this period and the little that occurs is in association with the western disturbances that travel across North India.

3. The hot weather period extends from April to June, May being the hottest month of the year. The mean maximum temperature in this month at Udaipur is as high as 103° F. Udaipur has recorded a temperature as high as 112° F in May and June. These months are also generally dry.

4. The onset of the monsoon takes place by about the third week of June. Most of the annual rainfall is recorded during the months July, August and part of September. The rainfall is by no means continuous and heavy showers occur generally only in association with depressions from the Bay of Bengal which sometimes travel to this region. The maximum rainfall recorded in one day in Udaipur is about 5 inches and 7 cents. The rainfall is also variable from year to year. Udaipur having recorded 48 inches and 10 cents in 1917 and 9 inches and 9 cents in 1899.

5. The monsoon generally withdraws from the area by the middle of September after which a period of slightly warmer weather follows which ultimately cools down and merges into the cold season by December. October and November are months of clear or lightly clouded skies.

6. Climatological data of Udaipur are given in Annexure IX (d) and rainfall data of selected stations are given below:—

Based on data upto the end of 1940. Average rainfall (in cents)

	Kherwara	*Dungarpur*	*Banswara*	*Sirohi*
Annual	02698	02744	03675	02135
January	9	6	18	13
February	0015	0007	0013	0020
March	8	6	6	8
April	0005	0008	0003	0013
May	46	53	32	61
June	0412	0385	0480	0222
July	912	1027	1165	688
August	0777	0725	1162	0712
September	423	420	660	340
October	0066	0074	0096	0039
November	17	27	22	11
December	0008	0006	0018	0008

VI. Archaeology.

(*a*) *Udaipur District.*

1. This district is rich in archaeological remains. Ancient temples, many of which are exquisitely carved exist at Eklingji and Nagda not far from Udaipur City.

(*b*) *Banswara District.*

2. There is not much of archaeological interest in Banswara, apart from the ruins of a fine Jain temple at Kalinjara and the remains of about a dozen Hindu and Jain temples at the village of Arthuna in the south-west. An inscription dated 1080, found in the Mandanesh or Mandlesar temple at Arthuna, shows that the latter place was once an extensive city (Uchhunak Nagar or Patan), the capital of the Parmara chiefs of Bagar.

(*c*) *Sirohi District.*

3. The places of archaeological interest in the district are, in addition to Abu and the ruins of the ancient town of Chandrawati (south-west of Abu Road on the bank of the Western Banas river) which are not at present in Rajasthan, Vasant-garh (near Pindwara), an old fort where an inscription of the time of Raja Charmalat has been found dated A.D. 625; Nandia, with a well preserved Jain temple of the 10th century, and Wasa near Rohera, where there is a famous temple to Surya (the Sun-god) of the eleventh or twelfth century.

VII. Agricultural Conditions including soils.

(*a*) *Udaipur District.*

1. The following types of soil occur in the district.—

(i) Sandy loam to loamy and clay loam which occur in the eastern part consisting of Amet, Relmagra, Rajsamand, Mavli, Vallabhnagar and Bhopal Sagar Tehsils.

(ii) Medium loamy, sandy loam and stony in southern and western parts consisting of Tehsils Kumbhalgarh, Saira, Kotra, Phalasia, Kherwara, Sarada, Salumbar and Lasadia.

(iii) Medium loamy soil which is found in the central part consisting of Girwa (Udaipur) and Khamnor Tehsils.

(iv) Light loam and stony soil in the north, consisting of the Tehsils Deogarh and Bhim. About 25% of the total area, *i.e.* 965,000 acres are Khalsa and the rest, *i.e.* 2,931,000 acres are Non-khalsa. Whole of the district is reporting. About 484,000 acres are under cultivation, out of which about 224,000 acres have irrigation facilities. The important crops grown are rice, wheat, barley, maize, urad, sugarcane, cotton and tobacco.

Irrigation:—2. About one-fourth of the cultivated area is irrigated. Irrigation is mainly from wells. A layer of hard rock usually lies within a few feet of the surface and renders the construction of wells a task of great expense and labour. Water is raised by means of the Persian wheel or when the spring level is too far down for this contrivance, by the usual leather bucket. In shallow wells, the Persian wheel is sometimes worked by the feet and is termed *parti*. There are tanks in this district and almost every village has a tank of some kind; but the area irrigated from this source is small.

(*b*) *Banswara District.*

3. The soil is, for the most part, excellent. The black cotton variety in the west especially near the Mahi river, is said to be sufficiently fertile to yield two full crops annually without artificial irrigation, while in the north a rich red loam is found.

The average annual rainfall is about 50 inches. The principal crops are Maize and Rice in the autumn and Wheat, Barley, Gram and Sugar-cane in the spring. Out of the total area of 1,256,801 acres, 532,000 acres *i.e.* 42·3% are Khalsa and the rest Non-khalsa. Whole of the district area is reporting area, *i.e.* where agricultural statistics are compiled.

Irrigation:—4. Irrigation is mainly from wells and tanks, but only a small area is irrigated. Large stretches of fertile land in which water could easily be obtained, do not possess a single well, while tanks are few and far between, though some thing has been done in this direction this year. The total irrigated area is 2,000 acres which constitutes 0·5% of the total cultivated area of the district.

(*c*) *Dungarpur District.*

5. It is mostly a hilly area. The average rainfall in a year is about 40 inches. 564,000 acres *i.e.* 60·4% of the total area are Khalsa and the rest Non-Khalsa. Practically whole of the area is reporting *i.e.* agricultural records are maintained there. The important crops are, Rice, Wheat, Maize, Gram, Urad, Sesamum, Ground-nut and Sugarcane. The majority of cultivators are Bhils, who, speaking generally, grow rain crops only. Irrigation is mainly from tanks and to a less extent from wells and streams.

(*d*) *Sirohi District.*

6. The soil of Sirohi is on the whole fertile, especially in the eastern valley bordering the Aravallis. The soil in the western part comprising of Sheoganj, Sirohi and Reodar Tehsils is mostly sandy while that in the remaining part is of black and sandy loam type. The average rainfall in the district is about 30 inches. 429 thousand acres, *i. e.*, 39 per cent of the total area are Khalsa and the rest, *i. e.* 665 thousand acres Non-khalsa. 444 thousand acres *i.e.* 40·6 per cent of the total area are reporting, *i.e.*, where agricultural statistics are compiled and the rest 650 thousand acres are non-reporting. Out of the total area of 1,100 thousand acres about 87 thousand acres are under cultivation (including current fallows) and the rest un-cultivated. Irrigated area is about 63,000 acres. Irrigation is mainly from wells, water is drawn up by means of Persian wheels. During recent years, 4 fairly large tanks, capable of irrigating about 4,700 acres, have been constructed. The principal crops are Maize, Bajra, Moong and Sesamum in the autumn and Wheat and Barley in the spring. Irrigation is mainly from wells.

VIII. Homesteads of various classes of People.

1. For purposes of description the dwellings of Rajasthan Hills Division are broadly divided into Urban and Rural tenements.

Urban:—2. Town houses of the better class with terrace roofs are generally built on a slightly raised plinth. There is usually a platform or Chabutri between the main street and the house. At the back of this Chabutri runs the front wall of the lower part of the house with an entrance in the middle, furnished generally with a strong wooden door, having paintings of horses and elephants on either side of the door.

3. Entering from the street the first room is called "Pol" it is generally without furniture and is in some cases used as a Public Room (Darikhana) in which case there is a small carpet spread on a platform inside the Pol, or as a workshop if the owner of the house is an artisan. When not used as a Public Room, the women, in the case of non-purdah observing communities, sometimes sit in the Pol. The Pol leads to a small court-yard or chauk. The floor of this court yard is generally paved with stones and in some cases plastered with mud. It is open to the sky. Behind the

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court and opposite the entrance from (Pol) and sometimes on both the sides also there are rooms (ovras) which are usually dark and ill-ventilated and used as stores for grain and firewood and, sometimes as bed rooms for the elderly women of the house. To get to the upper floor there is generally in one corner of the courtyard a stair-case. The front room in the upper storey above the Pol is called the Medi or Parlour and is the room for guests. Except for a carpet and a row of cushions propped against the walls, some lamps hung from the ceiling and perhaps some pictures hanging against the walls, this room in the house of a man who keeps the old custom, is almost bare of furniture. In some cases a bed will be found for the head of the family or sometimes a guest sleeps in the Medi at night. Among those who adopt new ways, this room is furnished with tables &c., in Western fashion like a drawing room. The back rooms opposite the upper sitting room are also called Medi and are used as bed rooms by the sons of the family. The family clothing and sometimes the jewellery are stored in these rooms in strong boxes or in the almirahs made in the walls. As regards furniture a trader's house generally contains cots or *Palang* one each for a male member of the family, cupboards, carpets, quilts and mattresses except among people of modern taste, some of whom have begun to furnish their rooms after European fashion. The furniture of an artisan in middling circumstances consists of one or two quilts, a cot or two, a few beds, and cooking and drinking pots of brass.

Dwellings of Artisans and Poorer Classes:—4. The above description of a house also applies to dwellings of artisans except that they are generally without an upper storey and the roofs of lower storeys have also tiles instead of terrace and number of rooms may be a little bit less. The dwellings of poorer classes are little better than huts, the roof being made of tiles or thatch and the walls of mud. The space enclosed is sometimes divided into two by means of Kothas made of mud (receptacles for keeping grains etc.) In many cases the house has but one room.

Rural Houses:—5. But this is not enough to form a real picture of the homesteads of the people of Rajasthan Hills Division. Different classes of people have different types of houses according to their financial circumstances and according as their occupation in life requires. A house of a Palwi Bhil (Bhil living in Hill country) is situated all alone on the top of a hill on the slopes of which lies his cultivated land which is the main source of his means of livelihood. The house has low roofs, scarcely six feet high, mostly thatched and in some cases tiled, supported by four mud walls with no window, hole or aperture of any kind for the penetration of light or air, protected by a door of bamboo matting. The dimensions of the house being nearly 10′×8′. On one side of this house is a courtyard fenced by thorns of Babool (Acacia arabica) or in some cases of cactus in which he keeps his goats. On the other side supported by four wooden poles is his "Dengcha" or watch post, the floor of which is made of logs of wood spread over with dry grass which being covered with a bamboo mat serves the purpose of a spring mattress;the ceiling consists of a cupola made of bamboo-sticks and Dhak-leaves or dry grass. This is the only means of protection against the scorching rays of the sun of the Torrid Zone and the showers of rain and hail under which the Bhil sits and sleeps, guarding his farm around from wild animals. The house mentioned above is used as a kitchen, store house, guest house and a bed room for the family which normally consists of the mother and three or four children, the father of the family sleeping in the Dengcha mentioned above. The young kids are also kept in it for protection against wild dogs or jackals.

6. The only furniture consists of a wooden charpoy per head, covered with Bamboo matting. Not far from this house at a distance of about 10 paces is the heap of manure, the only capital requisite for his occupation.

7. The houses of country Bhils or Bhils in the Plain portion are different from those of Palwi Bhils only in this respect that they are not situated at a distance from one another. All the Bhils of a village live close together on the out-skirts of the village close by the manure pits. Their cultivated land is situated at a distance hence their "Dengchas" or watch-houses are erected in the fields and not near the houses.

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D. RAJASTHAN PLATEAU DIVISION.

I. Composition.

This division consists of the districts of Kotah, Bundi, Jhalawar and Chittorgarh.

II. Position, Area and Boundary.

It is situated between 23° 45′ and 24° 41′ north latitudes and 74° 29′ and 75° 00′ east longitudes. Its area is about 12,465·9 square miles. It is bounded on the north by Bhilwara, Sawaimadhopur and Tonk Districts; on the west by Udaipur District; on the south and east by Gwalior (Madhya Bharat).

III. Physiography.

(*a*) *Kotah District.*

Configuration:—1. In shape the District is something like a cross with a length from north to south of about 115 miles and a greatest breadth of about 110 miles. The country slopes gently northwards from the high tableland of Malwa and is drained by the Chambal and its tributaries all flowing in northerly or north-easterly direction.

Hill System:—2. The Mukandwara range of hill (1,400 to 1,600 feet above sea level) running across the southern portion of this District from north-west to south-east is an important feature in the landscape. It has a curious double formation of two separate ridges parallel at a distance sometimes of more than a mile. There are hills (over 1,500 feet above the sea level) near Indargarh in the north and also in the eastern Tehsil of Shahabad where is found the highest point in the district (1,800 feet).

River System:—3. The principal rivers are the Chambal, Kali Sindh and Parbati. The Chambal enters Kotah on the west not far from Bhensrorgarh, and for the greater part of its course forms the boundary, first with Bundi on the west and next with Sawai Madhopur on the north. At Kotah City it is, at all seasons, a deep and wide stream which must be crossed by a bridge, or by ferry. The Kali Sindh enters this district in the south, forms for about 35 miles the boundary between Kotah on the one side and the Gwalior, Indore and Jhalawar on the other, and on being joined by Ahu, forces its way through the Mukandwara hills, and flows almost due north till it joins the Chambal near the village of Piparda. The Parbati is also a tributary of the Chambal. Its length within Kotah limits is about 40 miles. It is dammed near the village of Atru, where it is joined by the Andheri, and the waters thus impounded are conveyed by canals to about 40 villages and irrigate 6,000 to 7,000 acres. Other important streams, all subject to heavy floods in the rainy season, are the Parwair and Ujar, tributaries of the Kali Sindh, the Sukri, Banganga and Kul, tributaries of the Parbati and the Kunu in the Shahabad Tehsil.

(*b*) *Bundi District.*

Configuration and hill ranges:—4. The district may be roughly described as an irregular rhombus, traversed throughout its whole length from south-west to north-east by a double line of hills constituting the Central Bundi range, which divides the country into two almost equal portions. For many miles the precipitous scarp on the southern face of this range forms an almost impassable barrier between the plain country on either side. The highest peak of the range (1,793 feet above the sea level) is at Satur 10 miles west of Bundi town.

Rivers:—5. The Chambal, though it never enters the district forms for nearly the whole distance its southern and eastern boundaries; it varies in breadth from 200 to 400 yards. Its principal tributary from the Bundi side is the Mej. The latter rising in Bhilwara District at an elevation of about 1,700 feet above sea level, flows almost due north for 13 miles till it enters the Bundi territory near the village of Nigarh. The Mej drains both the northern and southern portions of the district; its chief tributary in the former is the Bajaen and in the latter the Kural.

(c) *Jhalawar District.*

Configuration:—6. In shape it resembles the letter 'S' with a length of about 85 miles and a breadth varying from 3 to 17 miles. The country rises gradually from 1,000 feet above sea level in the north to about 1,500 feet in the south. A narrow range of low and fairly wooded hills runs south-east past the town of Jhalrapatan in the north and the southern half of the district is generally hilly and intersected by small streams, but the rest of the country is rich undulating plain.

Rivers:—7. The principal rivers are the Chambal and the Kali Sindh, but neither ever actually enters the district, the former flowing 9 miles along the south-western and the latter for about 17 miles along the north-eastern boundary. The Choti Kali Sindh enters the district in the south-west and after flowing for about 20 miles joins the Chambal. The Ahu river rises near the Cantonment of Agar and flows north, generally along the borders of Jhalawar till it reaches Mukandwara range of hills, when it turns abruptly to the south-east and about 8 miles lower down joins the Kali Sindh near Gagraun.

(d) *Chittorgarh District.*

Configuration:—8. The northern and eastern portion generally consist of an elevated plateau of fine open undulating country sloping gradually to the north-east. To the east of Chittorgarh is a series of hills, all running north and south and forming narrow confined valleys, parallel to each other. The greater portion of the Partabgarh Sub-division consists of fine open land, but the north-west is wild, rocky and hilly, and range which in places attains an elevation of 1,900' forms the entire western boundary.

Rivers:—9. The chief river of this district is the Berach which rises in the hills north of Udaipur City and passes through the Udaisagar lake and flows east by north-east past Chittorgarh where it receives the Gambhiri and eventually joins the Banas. The Jakam, rises near Chhoti Sadri flows through the north-west of Partabgarh Sub-division and eventually falls into the Som, a tributary of Mahi.

IV. Forests.

(a) *Chittorgarh District.*

1. The area contains isolated blocks of high hills, with an elevation of 300' to 500' above the surrounding plains. Forests appear both on the hills as well as on the plains. But due to proximity of villages and easy accessibility, the condition of the plain forests is deplorable.

2. The forests are of four distinct types *viz.* (i) hill type, (ii) plateau type, (iii) ravine or valley type and (iv) Plain type. A major portion of the forest is occupied by hills. They are mainly composed of Dhokra mixed with Khair, Timru, Kulam, etc.

(i) & (ii) Dhaura, Salar, Godal, with scattered Khair and Dhokra are the main trees of hill and plateau type.

(iii) Kodia (Terminalia arjun) Jaman, Khakhra, Mahua, Khejra, Khair, Ber, etc., are met with, in valleys.

(iv) Following species are met frequently in the plains, *viz.*, clumps of Feronia elephantum (Kaith) Khejra, Khejri, Balanites rox-bughri, etc.

3. Main marketable forests products are charcoal and fuel along with such other minor produce as Katha, Karaya gum, honey, wax, grass, hides, Biri leaves, medicinal plants, Aonla, etc. which are exported to markets of Ajmer, Ahmedabad, Kanpur, Bombay, etc.

4. Babul (Acacia arabica) plantation on experimental basis has been tried in plain forests with success.

(*b*) *Kotah District.*

5. The elevation of the vast level and gently sloping ground varies from 800′ in the northern part of the district to about 1,000′ in the southern parts. The main Darrah range, which lies in the southern portion of the district; as well as Vindhyan escapement lies between 1000′ and 1600′ above sea level. Highest peak of Mamnoi hill being 1791′ in Shahabad Tehsil. Forests are chiefly mixed deciduous dry type and scattered over the large extent of the country and occurring on various soil formations. They vary much in composition and quality. About 50% of the area are either occupied by bare rocks or covered sparsely with a poor type of scrub. In shooting blocks of the Maharaja of Kotah the crop is quite normal but at another places fully stocked areas are very limited in extent. Roughly the distribution of different types of forest is as follows:—

Gregarious dry forests of Anogeissus pendula mixed with patches of Khair.	24 per cent.
Pure and mixed dry Teak forests.	5 per cent.
Drier and more open type of forests in which stunted trees are scattered over large grassy areas.	7 per cent.
Unclassed forests.	64 per cent.

6. Following species are met with frequently in the forests of Kotah District *viz.* Teak fit for use as beams, Dhawn, Dhokra, Kora, Khair, Bel, Tendu, Ber, Cheela, Aonla, Dudhi, Jhinghia, Saris black and white, Kadam, Bahera, Mohwa, Chironji, a few trees of Sandal, Khejra, Khejri, etc. Sin grass (Schima nervosum) which is considered to be one of the good quality fodder is quite common in grass *Birs.* Grass is in excess of the local requirement and is exported to different places as Saurashtra, Ajmer, etc. in famine years. Minor produce such as flowers, fruits, Mohwa, Chironji, gums, honey and wax are sold on contract system and consumed locally. Leaves of Dhau are collected by local Chamars for tanning purposes. Other tanning materials available are bark of Kora and Babul. Katha coupes are auctioned usually fetching better prices compared to other districts of Rajasthan and are a main source of revenue. Roads into the forest are being extended and it is expected that they will bring the remote portions of the forest within the possibility of economic working.

7. Teak forests are generally poor corresponding to IV quality class as adopted in C.P. The dimensions vary from 25″ to 40″ in height and 5″ to 10″ in diameter, generally above 8″ diameter logs become unsound. Coppice shoots shoot up vigorously but slow down after 10 years of age. Babul *raris* are situated in plain Tehsil of Kotah. They are maintained to meet the local demand of timber for agricultural implements.

(*c*) *Bundi District.*

8. Roughly, the forest area of the district is 1000 Sq. miles. Demarcation of forest is under progress. The commonest trees are Anogeissus pendula, Acacia catechu, Prosopis specigera, Acacia leucophloea, Butea frondosa, Mahua, (Bassia latifolia) Ficus Glomerata, Melia indica, Ficus religiosa, Ficus bengalensis, Phyllanthus, Emblica, Tamarind, (Diospyrus tomantosa).

9. The forests are well protected and a few years ago an exotic Prosopis juliflora was introduced. It has established and is thriving well.

(*d*) *Jhalawar District.*

10. The main species found in this area are Anogeissus pendula, Butea frondosa, Prosopis specigera, Acacia leucophloea, Disospyrus montana Aegle marmelos, and Mahua. A few plants of Teak were tried in the nursery area. They have established well. The forests have not been demarcated nor have these been properly surveyed.

V. Climate, Temperature and Rainfall

1. This part of Rajasthan gets more rain than the areas to the north and west. The mean annual rainfall varies from 26 inches at Patan in Bundi to about 43 inches at Manoharthan and Chhabra. Also, the hot and cold seasons are slightly less severe than in the northern and western districts of Rajasthan.

2. The cold weather period extends from December to February. The mean daily maximum temperature in January, the coldest month of the year is 77° F at Kotah and 78° F in Brijnagar while the mean minimum temperature is 51° F and 48° F respectively. The lowest minimum temperature recorded at Kotah is 35° F and at Brijnagar 31° F. On an average, only about ½ inch of rain is recorded during the three months December to February and this occurs in association with the winter disturbances. The weather starts getting warmer in March and the hot season extends from April to June, May being the hottest month of the year. In this month, the mean maximum temperature at Kotah and Brijnagar is about 107° F. The mean minimum temperature is also quite high being 85° F in Kotah and 80° F in Brijnagar. Kotah has recorded a temperature of 118° F and Brijnagar 116° F in May. Thunderstorms are also experienced in each of the months of April, May and June.

3. The onset of the monsoon takes place by about the third week of June and 3 to 4 inches of rain occur during this month. July and August are the rainiest months of the year when nearly two-thirds of the annual rainfall are recorded. An appreciable quantity of rain, as much as 5 to 6 inches is recorded in September also. As regards heavy rainfalls exceeding 10 inches in 24 hours have been recorded at several stations in the area. Bundi, Chechat and Hindoli have recorded 14 inches and 58 cents, 15 inches and 9 cents and 16 inches and 27 cents respectively. Such falls are generally associated with the movement of monsoon depressions from the Bay of Bengal. The monsoon rain is mostly of the thunderstorm type. Rainfall is highly variable from year to year, Kotah having recorded 62·72 inches of rain in 1917 and only about a tenth (6·76 inches) of that amount in 1905. The monsoon withdraws from the area by about the end of September and a period of warmer but clearer weather sets in. There is generally very little rainfall during the rest of the year. By November the weather cools down considerably and the cold weather sets in by December.

The Climatological tables are given in Annexure IX (c) and the Rainfall data of selected stations are given below:—

Based on data up to the end of 1940.
Average Rainfall (in cents)

	Partabgarh	*Sultanpur*	*Bundi*	*Dag*
Annual	03211	02974	02792	03564
January	15	24	27	27
February	0013	0018	0018	0017
March	9	15	15	7
April	0004	0015	0013	0008
May	44	35	43	32
June	0449	0321	0258	0406
July	1005	1130	978	1160
August	1021	0957	0957	1181
September	526	365	402	593
October	0082	0063	0052	0073
November	28	15	13	42
December	0015	0016	0016	0018

VI. Archaeology.

(*a*) *Kotah District.*

1. Of interesting archaeological remains the oldest known is the Chaori at Mukandwara, belonging, it is believed, to the fifth century. The village of Kanawa, of which the old name was Kanvashram, or the hermitage of the sage Kanva, about 4 miles south-east of Kotah, possesses an inscription which is important as being the last trace of the Mauryas. It is dated in A.D. 740, and mentions two chiefs of this clan, Dhaval and Sivgan, the later of whom built a temple to Mahadeo. Among other interesting places are the fort Gagraun; and lastly Ramgarh, 6 miles east of Mangrol, where there are several old Jain and Sivaite temples.

(*b*) *Jhalawar District.*

2. The places of archaeological interest are the remains of the old city of Chandravati close to Jhalrapatan town, and the rock-cut stupas at the village of Kholvi, in the Dag Tehsil in the south. The latter are interesting as being probably the most modern group of Buddhist caves in India.

(*c*) *Chittorgarh District.*

3. This district is rich in archaeological remains. Stone inscription dating from the third century B.C. to the eighteenth century A.D. are numerous, but none has been found on copper of a date earlier than the twelfth century. Among buildings, the oldest are probably the two stupas at Nagari. On the lofty hill of Chittor stand the two well-known towers, the Kirti Stambh of the twelfth or thirteenth century, and the Jai Stambh of the fifteenth century; and several temples and palaces. Ancient temples, many of which are exquisitely carved, exist at Barolli near Bhensrorgarh; at Bijolia; and at Menal near Begun. Among places of archaeological interest are Junagarh, 10 miles south-west of the town, with its old fort, in which some Mughal prince is said to have resided, and the remains of a mosque, bath, and stables; Shevna, 2 miles east of Salimgarh, which tradition says was the capital Shivnagari, of a large State, and which must have been a fine city. Besides a fort, it contains several temples, one of which, dedicated to Siva, is beautifully carved. At Virpur, near Sohagpura, is a Jain temple said to be 2,000 years old, and old temples also exist at Bordia, 20 miles south of the town, and at Ninor in the south-east; but none of these places has been professionally examined.

(*d*) *Bundi District.*

4. Bundi town claims a very remote antiquity. Local historians attempt to trace its traditions back to the mythological period of the Maha Bharat. The oldest inscriptions found are in a couple of Sati temples on the banks of the river, which are supposed to bear dates A D. 35 and 93. Nainwa, Talwas and Khatkar are other important places in this district from the historical and archaeological points of view.

VII. Agricultural conditions including Soils.

(*a*) *Kotah District.*

1. The classification of the soil is as follows:—

(i) *Loam Soil.*—Found in eastern part constituting Kishanganj and Shahabad Tehsils and a portion of Kanwas and Ladpura Tehsils in the central region. It provides aeration to the crops. It has fair water retention capacity. It contains less of organic matter hence it is not so fertile as the clay soils.

(ii) *Clay Soil.*—The soil of the rest of the district is of clay type, comprising of Pipalda, Mangrol, Kanwas, Digod, Barod, Anta, Baran, Chipa Barod, Chhabra and Ladpura Tehsils. This soil has good water retention capacity with sufficient organic matter. It has cohesive and adhesive property and creeks are seen just after the rainfall in uncared fields. The normal annual rainfall is about 30″. About 3,000,000 acres *i.e.*, 82% of the total area are Khalsa and the rest *i.e.* 654,000 acres Non-khalsa. About 3,333,000 acres *i.e.*, 90% of the total area are reporting and the rest *i. e.*, 334,000 acres non-reporting. The cultivated area is about 1,500,000 acres out of which about 65,000 acres are under irrigation. The important crops grown are Wheat, Jowar, Rice, Maize, Gram, Moong, Sesamum, Linseed, Sugar-cane and Cotton.

(*b*) *Bundi District.*

2. The soil of the district can be classfied under 3 kinds.

(i) *Light gravely soil*, which occurs, in north-western part consisting of the Tehsils Nainwa, Hindoli and Bundi.

(ii) *Medium Black Soil*-in the eastern part consisting of Lakheri and Patan Tehsils.

(iii) *Light Brown Soil*, in the southern part *i.e.*, in Talera Tehsil. Rainfall in the district is fairly good about 30 inches in a year. About 80% of the total area *i.e.*, 1,130,000 acres are Khalsa and the rest *i. e.* 259,000 acres are Non-khalsa. Cent per cent of the area is reporting. About 434,000 acres are under cultivation of which about 47,000 acres have irrigation facilities. The important crops grown are Wheat, Barley, Gram, Jowar, Maize and Sugar-cane.

(*c*) *Jhalawar District.*

3. The soil is fertile, consisting of Black Cotton soil, which occurs in Aklera, Manohar Thana, Jhalrapatan, Asnawar, Pachpahar, Bakani and Khanpur Tehsils and Black and loam soil which is found in Dag, Pirawa and Gangdhar Tehsils. There is a plenty of rainfall about 35″. About 87·7% of total area *i.e.*, 1,221,000 acres are under Khalsa and the rest Non-khalsa. 95·2% of the total area *i.e.*, 1,326,000 acres are under the reporting category and the rest are non-reporting. Of the total cultivated area, 7·6% *i.e.*, 43,000 acres are under irrigation. The important crops grown are Rice, Wheat, Gram, Jowar, Maize and Cotton.

(*d*) *Chittorgarh District.*

4. The classification of the soil is as follows:—

(i) *Black Cotton soil* which occurs in Nimbahera, Chhotti Sadri, Bari Sadri, Kanera, Partabgarh and Achnara Tehsils.

(ii) *Loam and Sandy loam soil* is found in Dungla, Bhadesar, Chittorgarh and Gangrar Tehsils.

(iii) *Sandy red loam soil* is found in Kapasin and Rashmi Tehsils.

(iv) *Rocky soil* and Mountainous constitute the soil of Begun and Bhensrorgarh Tehsils. Rainfall is fairly good, about 30″ annually. 43% of the total area *i.e.*, 979,000 acres, are Khalsa and the rest *i.e.*, 1,299,000 acres are Non-khalsa. Whole of the area is reporting *i.e.*, agricultural statistics are maintained there. About 500,000 acres are under cultivation and the main crops are Wheat, Jowar, Maize, Barley, Gram, Urad, Sesamum, Ground-nut, Sugar-cane and Cotton.

ANNEXURE I.

List of villages transferred to Rajasthan from other States.

EAST PUNJAB.

Sansairi (Sanseri).
Baori.
Ghatmika.
Shajanpur.
Chaubra.
Gajuka.
Feadpur.
Fatehpur.
Samdika.

UTTAR PRADESH.

Indoli (Indroli)
Somauna (Samona).
Phulwara.
Jarga.
Miagujar.
Mothuka.

P. E. P. S. U.

Mothuka.
Komgthala (Kamakhthali).

BOMBAY.

Sarwana.
Varamba.

MADHYA BHARAT.

Makanganj (Makhanganj).
Nal.
Maheshara.
Nandwai.
Narsinghpura.
Nadhopur.
Nimod (Nimoda).
Anandpura.
Kishanpura.
Gopalpura.
Bhawancha.
Naya Gaon.
Khedi.
Deopura Raeti (Raiti).
Jaisinghpura.
Haripura.
Kalda (Khalda).
Ghatera.
Bachedi Jundal.
Piplias (Pipliwas).
Piplia Deoda.
Radui Kheda.
Karoli.
Mawara (Mawara).
Bhut Khera.
Utia Kheda.
Nhinowda.
Kachumbra.
Chir Kheda.
Bhagdera (Bhagera).
Majhawas.
Khajuria.
Bichor.
Basotha.
Muroli.
Amarkhal.
Nanoda.
Bhawanipura.
Tejpupa.
Toomba (Tumba).
Hardeopura.
Kethonda.
Thukrani (Thukrai).
Basai Fatehpur.
Karanpura.
Dhanora.
Padawas.
Nilyadehec.
Baman Kheda.
Hadmatia Kundal.
Jalodia Khurd.
Surajpura.
Kaishisthal.
Karoli.
Bhatoli Gujran.
Mad Kia (Mandpia).
Chadkia (Charlia)
Nikumbha (Nikum).
Kheda Sutaran.
Padlia Rampuria.
Miloni Kheda.
Arnia.
Amal Heda.
Raithala.
Bhopura.
Alampura.
Sheopura (Shivpura)
Amalda Jalampur.
Deori.
Guda.
Haripura.
Jhadol.
Chandia Bichor.
Mandona (Narana).
Ramnagar.
Awalheda.
Parkhiya Khedi.
Gudhana.
Mankeshwar.
Dhaminia.
Kesoda.
Chandoli.
Padliwas (Parliawas).
Narbadia.
Jhad Sadri.
Bhatoli Gujran.
Nim Gaon,
Gona Kheda.
Milana.
Punaoli (Punawali)
Bhatoli Brehmanan.
Khedi Khundal.
Gangapur.
Udliawas (Udaliwas).
Surawas.

List of villages transferred from Rajasthan to other States.

EAST PUNJAB.

Khori.
Nimkhera.

UTTAR PRADESH.

Nagla Borha.
Shamepur.
Dharampura.
Nagri.
Bad.
Karahi.
Umri.
Bhensa.
Khora Jat.

MADHYA BHARAT.

Nomrol.
Khokra.
Jaswantpura.
Kewakpura.
Ralaita.
Naya Purana.
Khor Kudi.
Ubapana.
Bora Kudi.
Bisalwas.
Sarjana.
Gadri Guda.
Kenpuria.
Beher.
Lasudia.
Melki.
Renpura.
Cheppon.
Khalpura.
Kanwarji-ki Khedi
Pandjuri.
Rehpura.
Kanukpura.
Sarwaria.
Jhanwar-ka Rajpura.
Dungaria.
Kolpura.
Inderji-ka Khera.
Bhar Bharia.
Borkheri Kalan.
Hathipura.
Chaeu.
Poplia.
Sid-ka Khera.
Palsoda.
Hadmatia.
Mial (Bombay)
Tokra.
Khanpura.
Palasia.
Kanwarji-ka Kheda.
Sujanpura.
Juna Purana.
Fatehpura.
Kulnia.
Umedpura.
Piplia Guda.
Surwana Borkheri.
Borkheri Khurd.
Raisinghpura,
Bholawas.
Baudia.
Lemli.
Nalkhera.
Bhanwar Kua.
Luwa.

ANNEXURE II.

GOVERNMENT OF INDIA
MINISTRY OF HOME AFFAIRS.
OFFICE OF THE REGISTRAR GENERAL, INDIA.

MEMORANDUM.

SUBJECT:—Population Zones, Natural Regions, Sub-Regions and Divisions.

It has been customary in past Census reports to compile subsidiary tables and review of census data not only for the political and administrative divisions of the country but also for what are called "Natural Divisions". This system continued in the case of Provinces and States, while for all India the reference to "Natural Divisions" fell into disuse after 1911. The Registrar General considered it necessary to formulate a basis of territorial divisions, for purposes of review of All-India data also. In his letter No. 4/450-RG dated the 5th November, 1950, he invited the comments of the Census Superintendents on the "Natural Divisions" used at the 1911 Census. A copy of the reference was also sent to the Director General, Observatories and the Director, Geological Survey.

2. On a review of the replies received it appeared that the 1911 Scheme did not provide a suitable framework for purposes of review of population data in the All-India Census Report. A division of the country into a relatively small number of units cannot be based on existing political divisions as well as natural features at the same time. The Registrar General, therefore, made the following proposals:—

(i) The country should be divided into six Union Population Zones by grouping together the political units (*e.g.* States) on the basis primarily of contiguity and convenience for purposes of review;

(ii) Independently of the division of the country into Union Population Zones, the country should also be divided into eight "Natural Regions" based solely on physical features;

(iii) "Regional Divisions" should be formed on the basis of intersection of "Natural Regions" with existing political divisions.

3. The replies received from the Superintendents on these proposals indicated that the present approach was satisfactory in principle. Before finalising them the Registrar General considered the matter again at a meeting in which the representatives of the Director General Observatories, Director Geological Survey and the Planning Commission were present. The members of the Population Advisory Committee and the Ministry of Agriculture were kept in touch throughout, and a representative of the Director General, Health Services also attended the meeting. As a result of the discussions which took place at this meeting and after further consideration the Registrar General decided to make a few modifications in the foregoing proposals as indicated below:—

(i) The country should be divided into six Union Population Zones by grouping together the political units (*e.g.* States) on the basis primarily of contiguity and convenience for purposes of review.

(ii) (a) Independently of the division of the country into Union Population Zones, it should also be divided into five "Natural Regions" should be sub-divided into 15 "Natural Sub-Regions" based solely on physical features, and without reference to material differences in soil and rainfall conditions.

(b) These five "Natural Regions" on the basis of substantial differences within each ural Region, in respect primarily of soil or rainfall conditions, and also taking into o unt differences in the cropping pattern.

(iii) These 15 "Natural Sub-Regions" should be divided into 52 "Natural Divisions" on the basis primarily of intersection of "Sub-Regions" with existing political divisions.

(iv) The Bay Islands need not be included within any Region or Sub-Region; but treated independently as a distinct "Natural Division".

4. The scheme of division is summarised in the statement below:—

SUMMARY STATEMENT.

S. No.	Name of Natural Region	Number of Natural Sub-Regions	Natural Division
1	Himalayan Region	2	10
	Northern Plains Region	4	13
3	Peninsular Hills and Plateau Region	5	18
4	Western Ghats and Coastal Region	2	8
5	Eastern Ghats and Coastal Region	2	3
		15	52
			Bay Islands
		Total ..	53

Note:—The Natural Divisions consist normally of entire districts. There are, however four districts which form an exception to this rule. Consistently with past practice, parts of each of these districts are included in different "Natural Divisions."

5. The final result is shown in Appendices A, B and C. Appendix A is a list of Zones, specifying States included in each Zone. Appendix B shows all the States arranged in Zonal order, with all "Natural Divisions" shown under each State, and all the districts of each "Natural Division" shown against each division. Appendix C shows the division of India by Natural Regions, Sub-Regions and Divisions.

Note:—Appendix C sets out a three-number-code to represent every "Natural Division". The first number of code defines the "Region" The second number defines the "Sub-Region" in the Region. The third number defines the "Division" in the "Sub-Region".

6. It is possible that a few among these "Natural Divisions" (*e. g.* Uttar Pradesh and Madras) are too large or insufficiently homogeneous in respect of natural conditions affecting the growth of population and means of livelihood. In such cases Superintendent may Sub-divide them where necessary and form their own State Population Divisions, for purposes of review in State Census Reports. All that is necessary from the All-India point of view is that figures for "Natural Divisions" should ordinarily be available directly and in special cases, by summation of the figures of more than one State Population Division. Figures for "Natural Divisions" thus provided in State Census Reports, will be utilised for purposes of compilation and review in All-India Census Report, partly on a geopolitical basis by Zones and States; and partly on a geo-physical basis by Natural Regions and Sub-Regions.

APPENDIX A.

Grouping of States in Union Population Zones and number of "Natural Divisions" and District in each State.

Population Zones	States	Number of Natural Divisions	District
I. North India ..	Uttar Pradesh ..	5	51
II. East India	Bihar ..	3	18
	Orissa	2	13
	West Bengal ..	2	15
	Assam	2	15
	Manipur	1	1
	Tripura	1	1
	Sikkim	1	1
		12	64
III. South India ..	Madras	4	26
	Mysore	1	9
	Travancore-Cochin ..	1	4
	Coorg	1	1
		7	40
IV. West India ..	Bombay	5	28
	Saurashtra	1	5
	Cutch	1	1
		7	34
V. Central India ..	Madhya Pradesh ..	3	22
	Madhya Bharat ..	3	16
	Hyderabad	2	16
	Bhopal	1	2
	Vindhya Pradesh ..	1	8
		10	64
VI. North West India ..	Rajasthan	4	25
	Punjab	2	13
	P. E. P. S. U. ..	1	8
	Kashmir	1	14
	Ajmer	1	1
	Delhi	1	1
	Bilaspur	1	5
	Himachal Pradesh		
		11	67
	Bay Islands ..	1	1
	Grand Total ..	**53**	**321**

APPENDIX B.

Districts by Natural Divisions and States

State/Natural Division	District.
Uttar Pradesh.	
Himalayan Uttar Pradesh Division ..	Garhwal, Tehri-Garhwal, Nainital, Almora, Dehra Dun.
East Uttar Pradesh Plain Division ..	Gorakhpur, Basti, Gonda, Baharaich, Deoria, Banares, Jaunpur, Ghazipur, Ballia. Azemgarh.
Central Uttar Pradesh Plain Division ..	Kanpur, Fatehpur, Allahabad, Lucknow, Unao, Rai-Barelli, Sitapur, Hardoi, Fyzabad, Sultanpur, Pratapgarh, Bara Banki.
Western Uttar Pradesh Plain Division ..	Saharanpur, Bareilly, Bijnor Pilibhit. Rampur, Kheri, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Muthra, Agra, Mainpuri, Etah, Budawn, Moradabad, Shahjahanpur, Etawah, Farukhabad.
Uttar Pradesh Hills and Plateau Division ..	Jhansi, Jalaun Hamirpur, Banda, Mirzapur.
Bihar.	
North Bihar Plain Division	Saran, Champaran, Muzaffarpur, Darbhanga, Purnea, Bhagalpur (Part), Monghyr (part).
South Bihar Plain Division	Patna, Gaya, Shahbad, Bhagalpur (Part), Monghyr (Part).
Chota Nagpur Division	Hazaribagh, Ranchi, Dhanbad, Plamau, Singhbhum, Manbhum, Santhal, Parganas.
Orissa.	
Orissa Inland Division	Mayurbhanj, Koonjhar, Dhenkanal, Sundergarh, Phulni, Ganjam (part), Sambalpur, Bolangir, Kalahandi, Koraput.
Orissa Coastal Division	Balasore, Cuttack, Puri, Ganjam, (part).
West Bengal.	
Himalayan West Bengal Division ..	Darjeeling, Jalpaiguri, Cooch-Bihar.
West Bengal Plain Division	Hoogly, Howrah, 24 Parganas, Calcutta, Burdwan, Birbhum, Bankura, Midnapur, Nadia, Murshidabad, Malda, West Dinajpur.

State/Natural Division	District.
Assam.	
Assam Hills Division	United Khasi and Jaintia Hills, Naga Hills, Lushai Hills, Core Hills, Mikir and North Cachar Hills. Mishmi Hills, Abor Hills, Tirap Frontier Tract, Balipara Frontier Tract.
Assam Plain Division	Cachar, Goalpara, Kamrup, Darrang, Howgong, Sibsagar, Lakhimpur.
Manipur Division	Manipur.
Tripura Division	Tripura.
Sikkim Division	Sikkim.
Madras.	
Madras Deccan Division	Bellary, Anantapur, Cuddapah, Kurnool.
West Madras Division	Malabar, South Kanara, Nilgiris.
North Madras Division	Srikakulam, Vazigapatam, East Godavari, West Godavari, Krishana, Guntur, Nellore.
South Madras Division	Chittoor, North Arcot, Salem, Coimbatore, Trichinopoly, Madura, Chingleput, Madras, South Arcot, Tanjore, Ramnad, Tinnevelly.
sore.	
Mysore Division	Banglore, Kolar, Tumkur, Mysore, Mandlya Chittaldrug Hassan, Ghickmaglar Shimoga.
Travancore-Cochin.	
Travancore-Cochin Division	Trivandrum, Quilon, Kottayam, Trichur.
Coorg.	
Coorg Division.	Coorg.
Bay Island	Andamans and Nicobar.
Bombay.	
Bombay Deccan Northern Division ..	West Khandesh, East Khandesh Dangs, Nasik, Ahmednagar, Poona, Satara North, Satara South, Kolhapur, Sholapur.
Bombay Deccan Southern Division ..	Belgaum, Bijapur, Dharwar.
Bombay Gujrat Division	Banskantha, Sabarkantha, Mehsana, Ahmedabad, Kaira, Panch Mahals, Baroda, Broach, Surat, Amreli.

State/Natural Division	District.
Bombay (*Concld.*)	
Greater Bombay Division	Greater Bombay.
Bombay Konken Division	Thana Kolaba, Ratanagiri, Kanara.
Saurashtra.	
Saurashtra Division	Halar, Central Saurashtra, Zalwad, Gohilwad, Sorath.
Cutch.	
Cutch Division	Cutch.
Madhya Pradesh.	
North West Madhya Pradesh Division.	Saugor, Jubbulpur, Hoshangabad, Nimar, Betul, Chindwara, Mandla.
East Madhya Pradesh Division.	Balaghat, Bhandara, Chanda, Raipur, Bilaspur, Drug, Bastar, Raigarh, Surguja.
South West Madhya Pradesh Division.	Amraoti, Baldana, Akola, Yeotmal, Wardha, Nagpur.
Madhya Bharat	
Madhya Bharat Lowland Division ..	Bhind, Gird, Morena.
Madhya Bharat Plateau Division ..	Shivpuri, Guna, Mandsaur, Rajgarh, Shajapur, Ujjain, Ratlam, Bhilsa, Indore, Dewas.
Madhya Bharat Hills Division ..	Dhar, Jhabua, Nimar.
Hyderabad.	
North Hyderabad Division	Aurangabad, Parbhani, Nandor, Bidar, Bir, Osmanabad.
South Hyderabad Division	Hyderabad, Mahbubnagar, Raichur, Gulbarga, Adilabad, Nizamabad, Medak, Karim Nagar, Warangal, Nalgonda.
Bhopal.	
Bhopal Division	Sehore, Raisen.
Vindhya Pradesh.	
Vindhya Pradesh Division	Sindhi, Rewa, Satna, Shahdol, Datia, Chhatarpur, Tikamgarh Panna.
Rajasthan.	
East Rajasthan Plain Division ..	Jaipur, Tonk, Sawai Madhopur, Bharatpur, Alwar, Sikar, Bhilwara, Jhunjhunu.

State/Natural Division	District.
Rajasthan Dry Area Division ..	Ganganagar, Bikaner, Churu, Jodhpur, Barmer, Jalore, Pali, Nagaur, Jaisalmer.
Rajasthan Hills Division ..	Udaipur, Dungarpur, Banswara, Sirohi.
Rajasthan Plateau Division ..	Chittorgarh, Kotah, Bundi, Jhalawar.
Punjab.	
Himalayan Punjab Division ..	Kangra, Simla.
Punjab Plain Division ..	Ambala, Gurdaspur, Hoshiarpur, Amritsar, Jullundur, Ludhiana, Ferozepur, Karnal, Hissar, Rohtak, Gurgaon.
P. E. P. S. U.	
P.E.P.S.U. Division ..	Patiala, Barnala, Bhatinda, Mohindargarh, Kapurthala, Sangrur, Kohistan, and Fatehgarh Sahib.
Kashmir.	
Jammu and Kashmir Division ..	Jammu, Kathua, Udhampur, Reasi, Mirpur, Chenani-Jagir, Poonch Jagir, Baramulla, Anant Nag, Muzaffarabad, Ladakh, Astore, Gilgit (Leased Area) Gilgit (Agency).
Ajmer.	
Ajmer Division	Ajmer.
Delhi.	
Delhi Division	Delhi.
Bilaspur Himachal Pradesh.	
Bilaspur Himachal Pradesh Division ..	Bilaspur, Mahasu, Sirmoor, Chamba, Mandi.

APPENDIX C.

Natural Regions, Sub-Regions and Divisions.

1. Himalayan Region

1·1 Western Himalayan Sub-Region.

1·11 Himalayan Uttar Pradesh Division.
1·12 Himachal Pradesh and Bilaspur Division.
1·13 Himalayan Punjab Division
1·14 Jammu and Kashmir Division.

1·2 Eastern Himalayan Sub-Region.

1·21 Assam Plains Division.
1·22 Assam Hills Division.
1·23 Manipur Division.
1·24 Tripura Division.
1·25 Himalayan West Bengal Division.
1·26 Sikkim.

2. Northern Plains Region.

2·1 Lower Gangetic Plains Sub-Region.
2·11 West Bengal Plain Division.
2·12 North Bihar Plain Division.
2·13 South Bihar Plain Division.
2·14 East Uttar Pradesh Plain Division.

2·2 Upper Gangetic Plains Sub-Region.
2·21 Central Uttar Pradesh Plain Division.
2·22 West Uttar Pradesh Plain Division.

2·3 Trans—Gangetic Plains Sub-Region.
2·31 Punjab Plain Division.
2·32 P.E.P.S.U. Division.
2·33 Delhi Division.
2·34 East Rajasthan Plain Division.
2·35 Madhya Bharat Lowland Division.
2·36 Ajmer Division.

2·4 The Desert Sub-Region.

2·41 Rajastaan Dry Area Division.

3. Peninsular Hills and Plateau Region.

3·1 North West Hills Sub-Region.

3·11 Rajasthan Hills Division.
3·12 Rajasthan Plateau Division.
3·13 Madhya Bharat Plateau Division.
3·14 Madhya Bharat Hills Division.

3·2 North Central Hills and Plateau Division.

3·21 Uttar Pradesh Hills and Plateau Division
3·22 Vindhya Pradesh Division.
3·23 Bhopal Division.
3·24 North West Madhya Pradesh Division,

3·3 North-East Plateau Sub-Region.

3·31 Chota Nagpur Division.
3·32 East Madhya Pradesh Division.
3·33 Orissa Inland Division.

3·4 North Deccan Sub-Region.

3·41 South West Madhya Pradesh Division.
3·42 North Hyderabad Division.
3·43 Bombay Deccan Northern Division.

3·5 South Deccan Sub-Region.

3·51 South Hyderabad Division.
3·52 Bombay-Deccan Southern Division.
3·53 Mysore Division
3·54 Madras Deccan Division.

4. Western Ghats and Coastal Region.

4·1 Gujrat-Kathiawar Sub-Region.

4·11 Bombay Gujrat Division.
4·12 Saurashtra Division.
4·13 Kutch Division.

4·2 Malabar-Konkan Sub-Region.

4·21 Greater Bombay Division.
4·22 Bombay Konkan Division.
4·23 West Madras Division.
4·24 Travancore-Cochin Division.
4·25 Coorg Division.

5. Eastern Ghats and Coastal Region.

5·1 North Madras and Orissa Coastal Sub-Region.

5·11 Orissa Coastal Division.
5·12 North Madras Division.

5·2 South Madras Sub-Region.

5·21 South Madras Division.

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ANNEXURE III.

List of Districts, Tehsils and Towns with their Code Numbers.

M. = Municipality. N. A.=Notified Area. T. B.=Town Board.

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
	JAIPUR DIVISION		
2. JAIPUR ..	Jaipur ..	2/1 Jaipur (Rural)	Jaipur City M. Sanganer
		2/2 Chaksu	Chaksu T. B.
	Amber (Hq. Jaipur) ..	2/3 Amber	Amber M. Chomu M. Samod
		2/4 Jamwaramgarh	
	Shahpura ..	2/5 Bairath	Shahpura Paota Bairath M. Manoharpur
		2/6 Kotputli	Kotputli M.
	Dausa ..	2/7 Dausa	Dausa M. Bhandarej
		2/8 Baswa (Bandi Kui)	Baswa M. Bandikui
		2/9 Sikrai	Sikrai
		2/10 Lalsot	Lalsot M.
	Phulera (now called Sambhar)	2/11 Phulera	Phulera M. Naraina M. Jobner M.
		2/12 Phagi	Phagi Moazamabad
		2/13 Sambhar (Naib Tehsil)	Sambhar M.
	Kishangarh ..	2/14 Kishangarh	Kishangarh M.
		2/15 Arain	
		2/16 Sarwar	Sarwar M.
		2/17 Rupnagar	Rupnagar
3. TONK ..	Tonk	3/1 Tonk	Tonk M.
		3/2 Niwai	Niwai M.

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
3. TONK .. (*Concld.*)	TONK (*Concld.*)	3/3 Aligarh	
		3/4 Uniara (Anwa, Baretha, Nagar)	Uniara M.
	Malpura	3/5 Malpura	Malpura M.
		3/6 Todaraisingh	Todaraisingh M.
4. SAWAI-MADHOPUR	Sawaimadhopur	4/1 Sawaimadhopur	Sawaimadhopur M.
		4/2 Malarna Chor	Bonli
			Malarna Dunger
		4/3 Khandar	Khandar
	Gangapur	4/4 Gangapur	Gangapur M.
			Wazirpur
		4/5 Bamanwas	Bamanwas
		4/6 Nadoti	Nadoti
	Hindaun	4/7 Hindaun	Hindaun M.
		4/8 Toda Bhim	Toda Bhim M.
		4/9 Mahuwa	Mahuwa
	Karauli	4/10 Karauli	Karauli M.
		4/11 Sapotra	Sapotra
		4/12 Mandrail	Mandrail
5. BHARATPUR ..	Bharatpur	5/1 Bharatpur	Bharatpur M.
			Kumher T. B.
		5/2 Nadbai	Nadbai T. B.
	Deeg	5/3 Deeg	Deeg M.
		5/4 Nagar	Nagar T. B.
		5/5 Kaman	Kaman T. B.
			Pahari T. B.
	Bayana	5/6 Bayana	Bayana T. B.
		5/7 Weir	Weir T. B.
			Bhusawar T. B.
		5/8 Rupbas	Rupbas T. B.
	Dholpur	5/9 Baseri	Baseri T. B.
			Sar Mathura
		5/10 Dholpur (Gird)	Dholpur M.
		5/11 Raja Khera	Raja Khera T. B.
		5/12 Bari	Bari T. B.
			Sepau

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
6. ALWAR	.. Alwar	6/1 Alwar	Alwar City M.
			Bahadurpur
			Govindgarh
			Ramgarh
	Behror	6/2 Behror	Behror
		6/3 Bansur	Nimrana M.
	Tijara (Hq. Kishangarh)	6/4 Tijara	
		6/5 Mandawar	Tijara M.
		6/6 Kot Kasim	Kot Kasim
	Rajgarh (Hq. Alwar)	6/7 Rajgarh	Rajgarh M.
		6/8 Lachhmangarh	Kherli M.
		6/9 Thana Ghazi	Lachhmangarh
7. JHUNJHUNU	.. Jhunjhunu	7/1 Jhunjhunu	Jhunjhunu M.
			Pilani M.
			Bagad M.
			Mukundgarh M.
			Surajgarh M.
			Mandawa M.
			Mandrela
			Gudha
			Parasrampura
			Bisau M.
			Singhana M.
			Nawalgarh M.
	Udaipur (Wati)	7/2 Udaipur (Wati) Naib Tehsil	Udaipur (Wati)
	Khetri	7/3 Khetri	Khetri M.
		7/4 Chirawa	Chirawa M.
		7/5 Churi Ajitgarh	
8. SIKAR	.. Sikar	8/1 Sikar	Sikar M.
			Reengus
			Danta Ramgarh
			Losal M.
	Fatehpur	8/6 Danta Ramgarh	
		8/2 Lachhmangarh	Lachhmangarh M.
		8/3 Fatehpur	Fatehpur M.
		8/4 Ramgarh	Ramgarh M.

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
8. SIKAR (*Concld.*) ..	Neemkathana	8/5 Neemkathana	Neemkathana M. Srimadhopur M. Guhala Khandela M.
	BIKANER DIVISION.		
9. BIKANER ..	Bikaner North (Hq. Bikaner)	9/1 Bikaner	Bikaner City M. Gangashahr M. Bhinasar M. Napasar M. Deshnoke
		9/2 Lunkaransar	Lunkaransar M.
	Bikaner South (Hq. Bikaner)	9/3 Nokha	Nokha Mandi M.
		9/4 Kolayat (Magra)	
10. CHURU ..	Ratangarh	10/1 Ratangarh	Ratangarh M. Rajaldesar M.
		10/2 Sardarshahr	Sardarshahr M.
		10/3 Sujangarh	Sujangarh M. Chhapar M. Bidasar M.
		10/4 Dungargarh	Dungargarh M.
	Rajgarh	10/5 Rajgarh	Rajgarh M.
		10/6 Churu	Churu M. Ratannagar M.
		10/7 Taranagar	Taranagar M.
11. GANGANAGAR ..	Ganganagar	11/1 Ganganagar	Ganganagar M. Hindumalkot M.
	Karanpur	11/2 Karanpur	Karanpur M.
		11/3 Padampur	Gajsinghpur M.
	Raisinghnagar	11/4 Raisinghnagar	Raisinghnagar M.
		11/5 Anupgarh	Anupgarh M.
	Sadulgarh (Hanumangarh)	11/6 Sadulgarh	* Sadulgarh M. Sangaria M.
		11/7 Suratgarh	Suratgarh M.
	Nohar	11/8 Nohar	Nohar M.
		11/9 Bhadra	Bhadra M.

* Changed to Hanumangarh as per Rajasthan Government order.

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
		JODHPUR DIVISION.	
12. JODHPUR ..	Jodhpur	12/1 Jodhpur	Jodhpur City M.
		12/2 Shergarh	
		12/3 Bilara	Bilara
			Pipar
	Phalodi	12/4 Phalodi	Phalodi M.
			Lohawat
			Pokran M.
13. BARMER ..	Barmer	13/1 Barmer	Barmer M.
		13/2 Sheo	
	Balotra	13/3 Pachpadra (Balotra)	Balotra M.
			Pachpadra
		13/4 Siwana	
14. JALORE ..	Jalore	14/1 Jalore	Jalore M.
			Ahore
			Siana
	Bhinmal	14/2 Jaswantpura	Bhinmal M.
		14/3 Sanchore	
15. PALI ..	Pali	15/1 Pali	Pali M.
	Bali	15/2 Bali	Bali M.
			Takhatgarh
			Sewari
		15/3 Desuri	Sadri
	Sojat	15/4 Sojat	Sojat M.
			Bagri
	Jaitaran	15/5 Jaitaran	Jaitaran
			Nimbaj
			Raipur
		15/6 Sendra	
16. NAGAUR ..	Nagaur	16/1 Nagaur	Nagaur M.
			Mandawa
	Didwana	16/2 Didwana	Didwana M.
			Ladnun M.
	Parbatsar	16/3 Parbatsar	Makrana

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
16. Nagaur (*Concld.*) ..	Parbatsar (*Concld.*)	16/4 Nawa	Nawa M. Kuchaman
	Merta	16/5 Merta	Merta M.
17. JAISALMER ..	Jaisalmer	17/1 Jaisalmer (1 to 3) 17/6 Ramgarh (4 to 8) 17/10 Samkhaba (9 to 11) 17/13 Vinjorai @Fatehgarh (12 to 14)	Jaisalmer M.
	Bap	17/15 Bap (15 to 16)	
26. SIROHI ..	Sirohi	26/1 Sirohi 26/2 Sheoganj 26/3 Pindwara 26/4 Bhawari 26/5 Reodhar	Sirohi M. Sheoganj M. Pindwara M. Roheda M.
	UDAIPUR DIVISION.		
18. UDAIPUR ..	Bhim	18/1 Bhim 18/2 Deogarh	Bhim M. Deogarh
	Rajsamand	18/3 Amet 18/4 Kumbhalgarh 18/5 Rajsamand 18/6 Relmagra	Amet Kankroli
	Udaipur	18/7 Khamnor 18/8 Udaipur	Nathdwara M. Udaipur City M.
	Sarada	18/9 Salumbar 18/10 Sarada 18/11 Kherwara	Salumbar Kherwara N. A. (Contt).
	Vallabhnagar (Unthala)	18/12 Bhopalsagar 18/13 Mavli 18/14 Vallabhnagar 18/15 Lasadia	 Bhindar Kanor Dhariawad

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
18. Udaipur (*Concld.*)	Phalasia (Hq. Udaipur)	18/16 Phalasia	
		18/17 Saira	
		18/18 Kotra	Kotra Cantt. N. A.
19. DUNGARPUR	Dungarpur	19/1 Dungarpur	Dungarpur M.
		19/2 Aspur	Sabla M.
		19/3 Sagwara	Sagwara M.
			Galiakot M.
20. BANSWARA	Banswara	20/1 Gadhi	
		20/2 Ghatol	
		20/3 Banswara	Banswara M.
	Kushalgarh	20/4 Bagidora	
		20/5 Kushalgarh	Kushalgarh M.
21. CHITTORGARH	Begun	21/1 Bhensrorgarh	
		21/2 Begun	Begun
	Chittorgarh	21/3 Chittorgarh	Chittorgarh M.
		21/4 Gangrar	
	Kapasin	21/5 Rashmi	
		21/6 Kapasin	Kapasin N. A.
	Nimbahera	21/7 Bhadesar	
		21/8 Dungla	
		21/9 Bari Sadri	Bari Sadri
		21/10 Nimbahera	Nimbahera M.
		21/11 Kanera	
		21/12 Chhoti Sadri	Chhotisadri N. A.
	Partabgarh	21/13 Partabgarh	Partabgarh M.
		21/14 Achnera (Hq. Arnod)	
22. BHILWARA	Hurda	22/1 Badnor	
		22/2 Asind	
		22/3 Hurda	Gulabpura
	Shahpura	22/4 Jahazpur	Jahazpur
		22/5 Shahpura	Shahpura M.
		22/6 Phulia	
		22/7 Arwar	
	Bhilwara	22/8 Banera	Banera
		22/9 Mandal	
		22/10 Bhilwara	Bhilwara M.
			Pur

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
22. Bhilwara (*Concld.*) ..	Bhilwara (*Concld.*)	22/11 Sahadan	Gangapur M.
		22/12 Raipur	
		22/13 Kareda	
	Mandalgarh	22/14 Mandalgarh	
		22/15 Kotri	
KOTAH DIVISION.			
23. KOTAH ..	Kotah	23/1 Ladpura	Kotah City M. (Bhimganj Mandi)
		23/2 Digod	
		23/3 Barod	
		23/4 Itawa	
		23/5 Pipalda	Indargarh M.
	Chechat	23/6 Ramganjmandi	Ramganjmandi M.
		23/7 Chechat	
		23/8 Kanwas	
		23/9 Sangod	Sangod
	Baran	23/10 Antah	
		23/11 Baran	Baran M.
		23/12 Mangrol	Mangrol
		23/13 Kishanganj	
		23/14 Shahabad	
	Chhabra	23/15 Atru	
		23/16 Chhabra	Chhabra M.
		23/17 Chippa Barod	
	Sironj	23/18 Sironj	Sironj M.
		23/19 Lateri	
24. BUNDI ..	Bundi	24/1 Bundi	Bundi M.
		24/2 Talera	
		24/3 Patan	Patan M. Kapren M. Lakheri M. Lakheri Cement. Works.
	Nainwa	24/4 Nainwa	Nainwa M.
		24/5 Hindoli	
25. JHALAWAR ..	Jhalawar	25/1 Gangadhar	Gangadhar M. (including Chomehla)
		25/2 Dag	Dag M.
		25/3 Pirawa	Pirawa M.

No. and Name of District	Name of Sub-Division	Name of Tehsil	Name of Town
1	2	3	4
25. JHALAWAR (*Concld.*)	Jhalawar	25/4 Pachpahar	Bhawani Mandi M.
		25/5 Jhalarapatan	Pachpahar M.
			Jhalarapatan M.
	Aklera		Jhalawar. (Brijnagar)M.
		25/6 Khanpur	
		25/7 Aklera	
		25/8 Manoharthana	Aklera M.
		25/9 Bakani	
1. AJMER	AJMER STATE.		
	Ajmer	1/1 Ajmer	Ajmer City M.
			Nasirabad Cantt.
	Kekri		Pushkar
		1/2 Kekri	Kekri M.
			Deoli M.
	Beawar	1/3 Beawar	Beawar M.
			Bijainagar M.

ANNEXURE IV

Grasses available in Rajasthan

Serial No.	*Local Name*	*Botanical Name.*
1	Bhangta ..	.. Apluda aristata.
2	Rati ..	.. Panisetum parviflorum.
3	,, ..	.. Oplismenuc burmannii.
4	Gundad ..	.. Themeda quadrivalvis, O. Ktze.
5	Surwala ghas	.. Hetero pogon contortus (L) R. S.
6	Safed Surwala	.. Sehmia nervosum stapf.
7	Lili ratad ..	.. Hetero pogon contortus.
8	Gandel ..	.. Iseilema prostratum andero.
9	Buhari ..	.. Andropogon faveolatus Del.
10	Charrya ..	.. Setaria intermedeia R & S.
11	Burwai ..	.. Sorghum helepense (L) Pers.
12	Lal puniya ..	.. Andropogon pumilus Roxb.
13	Choti Rati Gundad	.. Themeda Laxa & Camus.
14	Sada grass ..	.. Ophiurus corymbosus Gaerth.
15	Kala Phundawala	.. Chloris virgata Sw-
16	Mota	.. Gyparus eleusionides Kunth.
17	Safed Puniya	.. Chloris Pallida H. K. F.
18	Surwala safed gundad	.. Sorghum puppureo-Seri coumaschers and schwion-F.
19	Chidion-ka-ghas	.. Eragrosis pumosa stap-F.
20	Chogawala ghas	.. Iseilema anthephoroides Hack.
21	Dundel ghas	.. Ischaemum molle HKF.
22	Sawa ghas ..	.. Echinochloa colonum Link.
23	Kutti ghas ..	.. Sataria verticillata Beauv.
24	Hava ..	.. Eragrostis diarrheua stend.
25	Malicha ..	.. Dactyloctenium aegyptium Beauc.
26	Suran ..	.. Anthraxon lanceolatus Hochst.
27	Dhola phundala	.. Apluda aristata.
28	Garrao ..	. Chrysopogon polyphyllus Blatter and M. C. Canu.
29	Dholi Lafria	.. Aristida setacea retoz.
30	Baru ..	.. Sorghum helepeuse (L) Pers.
31	Hekawali ..	.. Digitaris sanguivalis var.
32	Dholi Phundasali	Cymbopogon martini wats.
33	Dud ..	.. Cynodon dactylon.
34	Dbe ..	.. Imperata arundiancea.
35	Kans ..	.. Saccharum spontaneum.
36	Khas ..	.. Vetiveria Zizanoides.
37	Sein ..	.. Schima nervosum.
38	Bhurut ..	.. Cenchrus catharticus.
39	Mint ..	.. Panicum turgidum.
40	Gramma ..	.. Panicum antidatole.
41	Kuri ..	.. Panicum posilopodium.
42	Dhaman ..	.. Pennisetum conchroides.
43	Makra ..	.. Ellusine aegyptiaca.

ANNEXURE V.

List of Medicinal Forest Products of Rajasthan.

S. No.	Local Name	Botanical Name	Natural Order	Used in diseases	Particular parts used	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	धांसा	Adhatoda vesica	Acanthaceae	(i) Rheumatism (ii) Consumption (iii) Asthma (iv) Chronic Bronchitis	Leaves, flowers and roots	Small shrub generally found near habitation.
2	चिरोंजी	Buchanania latifolia	Anacardeaceae	(i) Baldness (ii) General debility	(i) Seeds (ii) Fruit. (iii) Gum. (iv) Leaves. (v) Roots.	Tree.
3	गोंदल	Lannea grandis	—do.—	....	Gum	Tree.
4	सीताफल	Anona sqamosa	Anonaceae	(i) Guinea worm (ii) Drastic purgative (iii) Insecticide	(i) Seeds. (ii) Roots. (iii) Fruit. (iv) Leaves.	
5	गिलोय	Tinospora malabarica.	Minspermaceae	(i) Fever (ii) Tonic. (iii) Enlarged liver.	Whole climber.	
6	चित्रक	Plumbago zeylanica	Myrsinaceae	Root is used in skin diseases	Root	Abundant in Alwar contract is given for it.
7	अरंडी	Ricinus communis	Euphorbiaceae	Purgative	Seed.	
8	आंधी झाड़ा	Achyranthes aspera	Amrantaceae	Diuretic and alterative given in menorrhagia Diarrhoea, Dysentry. It has a great reputation in dog bites given internally and externally applied, Juice in the opacity of the cornea scorpion bite, toothache.	1. Herb. 2. Flower heads. 3. Roots.	Quite common all over Rajasthan.
9	करोंदा	Carissa carandus	Apocynaceae	(i) Biliousness (ii) Refrigerant (iii) Digestive	1. Fruit. 2. Bark. 3. Leaves. 4. Roots.	
10	इन्द्र जौ	Holarrhena antidysenterica.	Apocynaceae	(i) Fever (ii) Chronic diarrhoea. (iii) Dysentry worms. (iv) Cholera.	1. Bark. 2. Seeds.	Small tree.

S. No.	Local Name	Botanical Name	Natural Order	Used in diseases	Particular parts used	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11	बुंधो	Wightia tomentosa	do.	(i) Snake bite (ii) Sting of scorpion. (iii) Stop bleeding.	(i) Bark. (ii) Roots. (iii) Milky juice.	
12	खिरनी	Wrightia tinctoria	do.	Used	Fruit	Leaves produce blue dye
13	आक सफेद फूल	Calotropis gigantea	Asclepiadiceae	(i) Fever (ii) Enlarged spleen (iii) Tonic (iv) Cough and Asthma (v) Anasarca. (vi) Ascites (vii) Drastic purgative.	(i) Roots, (ii) Leaves. (iii) Juice. (iv) Flower.	
14	आक लाल फूल	Calotropis procera	do.	do.	do.	
15	कुर संनी	Sarcostemma brevistigma.	do.	1. Snake bite, 2. Bitten by mad dogs.	Root	Roots called salar is ground and applied to snake bite and infusion of it taken by persons bitten by mad dogs. (Generally found in euphorbia bushes and along.)
16	जंगली करेला	Momordica Charantia	Cucurbitaceae	1. Stimulant 2. Alterative. 3. Ointment in skin diseases. 4. Anthelmintic. 5. Gout, Rheumatism. 6. Liver. 7. Spleen.	1. Fruit. 2. Seeds. 7. Leaves.	
17	जंगली खीरा	Cucum sativus	Cucurbitaceae	1. Demulcent 2. Nutritive.	1. Seeds. 2. Leaves.	
18	कंकेरा	Gymnosporia montana.	Celastraceae	Healing of sores	Leaves	Rocky places.
19	टीमरू मीठा	Diospyros embryopteris.	Ebenaceae	1. Astringent 2. Gonorrhea 3. Leucorrhoea 4. Uterine. 5. Haemorrhage. 6. Sore throat. 7. Diarrhoea. 8. Dysentry.	1. Unripe fruit. 2. Seeds. 3. Bark.	
20	टीमरू कड़वा	Diospyros montana	Ebenaceae	Boils	Fruit	
21	धावड़ा	Anogeissus latifolia	Combretaceae	1. Demulcent 2. Astringent	1. Gum. 2. Leaves.	
22	अर्जुन	Terminalia Arjun	"	1. Heart disease	Bark & leaves.	

S. No. (1)	Local Name (2)	Botanical Name (3)	Natural Order (4)	Used in diseases (5)	Particular parts used (6)	Remarks 7)
23	बहेड़ा	Terminalia belerica	"	1. Diarrhoea 2. Dropsy. 3. Leprosy. 4. Piles.	Bark and Leaves.	
24	अमर बेल	Cuscuta reflexa	Convolvulaceae	1. Alterative 2. Purgative. 3. Anthelmintic. 4. Liver diseases. 5. Bilious affections.	Fruit.	
25		Impmese spp.	"	1. Drastic purgative 2. Anthelmintic.	Seeds.	
26	गिरनार	Cochlospermum gossypium.	Bixineae	1. Demulcent 2. Astringent.	Gum.	
27	लहसोड़ा	Cordia dichotama	Boraginaceae	1. Demulcent 2. Irritation of urinary passage. 3. Cough.	Fruit, bark, leaves.	
28	नागफना थूअर	Opuntia dillenii	Cacteaceae	1. Asthma 2. Expectorant. 3. Alterative.	Fruit, flower, stem.	
29	गुग्गल	Commiphora mukul	Burseraceae	1. Renders loose teeth firmer 2. Ingredients of incenco.	Gum	Under the name of loban it is sold in the market
30	सालर	Boswellia serrata	"	1. Used in incense	Gum.	
31	निरगुंडी	Vitex negundo	Verbenaceae	1. Colic, 2. Rheumatism. 3. Worms. 4. Enlarged spleen. 5. Dropsy.	Root, fruit, leaves.	
32	गोखरू	Tribulus terristris	Zygophylleae	1. Diuretic 2. Gonorrhea. 3. Dysuria. 4. Diseases of urine	Fruit.	
33	हिंगोल	Balanites roxburghia	Simarubaceae	1. Purgative 2. Anthelmintic. 3. Expectorant 4. Animal diseases.	Seeds, bark, fruit, Leaves.	
34	धतूरा लाल	Datura alba	Solanaceae	1. Narcotic-Anodyne 2. Hepatic colic. 3. Laryngeal cough. 4. Sciatica. 5. Urti-caria. 6. Toothache.	Roots, leaves, Seeds.	
35	धतूरा सफेद	Datura fastuosa	"	Toothache	do.	

S. No. (1)	Local Name (2)	Botanical Name (3)	Natural Order (4)	Used in diseases (5)	Particular parts used (6)	Remarks (7)
36	जंगली बैंगन	Solanum Zanthocarpium.	Solanaceae	1. Asthma 2. Cough. 3. Fever. 4. Dysuria. 5. Dropsy. 6. Cystic calculi.	Plant.	
37	गोंगन (फालसा)	Grewia populifolia	Tilia ceae	1. Fever. 2. Dysentery.	Fruits, leaves, bark and root.	Rare.
38	वरगद	Ficus bengalensis	Urticaceae	1. Tonic 2. Astringent. 3. Diabetes. 4. Dysentery. 5. Gonorrhea.	Milky juice and bark.	
39	पीपल	Ficus religiosa	Urticaceae	1. Sore mouth 2. Asthma. 3. Leucorrhoea. 4. Dysentery. 5. Wash for ulcers. 6. Gargle.	Root, bark, fruit and leaves.	
40	बेर	Zizuphus spp.	Rhamnaceae	1. Leucorrhoea 2. Diarrhoea. 3. Scorpion bite. 4. Fever.	1. Bark. 2. Leaves.	
41	बीलपत्र	Aegle Marmelos	Rutaceae	1. Piles 2. Diarrhoea. 3. Dysentery and Asthma.	1. Fruit. 2. Root bark. 3. Leaves. 4. Rind of the Ripe fruit & flowers.	
42	बेंत	Feronia elephantum	Rutaceae	1. Diarrhoea 2. Dysentery. 3. Venomous insects bites.	Fruit, gum, leaves, bark and pulp.	
43	रीठा	Sapindus trifolinatus	Spindaceae	1. Anthelmintic. 2. Asthma. 3. Colic. 4. Worms.	Fruit and root.	
44	चन्दन	Santalum album	Santa-laceae	1. Astringent 2. Diuretic. 3. Expectorant. 4. Gonorrhea. 5. Abortion.	Oil seeds (pessaries).	
45	महुवा	Bassia latifolia	Sapotaceae	1. Rheumatic	Flowers and oil of seed.	
46	नीम	Melia Azadirachta	Meliaceae	1. Tonic 2. Paroxysmal fevers. 3. Worms. 4. Jaundice. 5. Leprosy. 6. Piles.	Root, bark, fruit, flowers, leaves and gum.	

S. No. (1)	Local Name (2)	Botanical Name (3)	Natural Order (4)	Used in diseases (5)	Particular parts used (6)	Remarks (7)
47	सेंजना	Moringaptery gosperma.	Moringeal	1. Antispasmodic 2. Stimulant. 3. Rheumatism. 4. Dropsy.	Bark, root, fruit, seed and gum.	
48	जामुन	Eugenia Jambolana	Myrtaceae	1. Scanty urine 2. Cronia Dysentery, diarrhoea, diabetes.	Fruit, leaves, seed and bark.	
49	कमल	Nelumbium speciosum.	Mymphaceae	1. Astringent 2. Useful in burning sensation of the body. 3. Bleeding piles menorrhagia. 4. Diarrhoea. 5. Cholera. 6. Fever.	1. Flower. 2. Leaves.	
50	हार सिंगार	Nyctanthus arbotistis.	Oleacea	1. Intermittent fever 2. Sciatica. 3. Rheumatism. 4. Purgative for infant.	Flower, leaves, fruit.	
51	खजूर	Phoenic sylvestria	Palmaceae	1. Nutritive 2. Diuretic 3. Tonic.	1. Fruit. 2. Juice.	
52	सफेद मूसली	Asparagun ascendens	Liliaceae	1. Gleet 2. Spermatorrhoea. 3. Leuchorrhoea. 4. Diarrhoea.	Roots.	
53	जंगली प्याज (कोली कांदा)	Urginea indica	Liliaceae	1. Stimulant 2. Expectorant. 3. Diuretic.	Bulb.	
54	नाहर कांटा	Asparagun racemosus.	Liliaceae	1. Rheumatism. 2. Billousness. 3. Diarrhoea. 4. Tonic.		
55		Gloriosa superba	Liliaceae	1. Abortion	Roots.	
56	जंगली तुलसी	Ocimum canum	Labiateae	1. Stimulant 2. Diaphoretic. 3. Carminative.	Juice of leaves.	
57	गेमल	Bombox malabaricum.	Malvaceae	1. Diarrhoea 2. Dysentery. 3. Tuberculosis of lung. 4. Menorrhagia.	Gum, seed, fruit, root, bark, cotton, flower.	
58	पारस पीपल	Thespesia populanea	Malvaceae	1. Alterative 2. Stimulant. 3. Skin diseases. 4. Rheumatism.	All parts of the tree are used.	
59	रत्ती	Abrus precatorius	Leguminosae	1. Cough 2. Gonorrhea. 3. Granular lids. Baldness.	Seeds, roots and leaves.	

S. No. (1)	Local Name (2)	Botanical Name (3)	Natural Order (4)	Used in diseases (5)	Particular parts used (6)	Remarks (7)
60	बबूल	Acacia arabica	Leguminosae	1. Tonic 2. Sore throat. 3. Gargle wash for Ulcers. 4. Food for diabetes patient.	Bark, leaves, gum and seeds.	
61	खैर	Acacia catechu	"	1. Diarrhoea 2. Dysentery. 3. Intermittent fever. 4. Scurvy.	Bark and extract from the heart wood.	
62	सिरस	Albizziak lebek	Leguminosae	1. Diarrhoea 2. Eye diseases. 3. Sore mouth. 4. Boils.	Seeds, bark, leaves, and flowers.	
63	कचनार	Butea frondosa	"	1. Astringent 2. Chronic dysentery, 3. Diarrhoea.	Leaves, bark, seeds and flower.	
64	पलास	Butea frondosa	"	1. Diuretic 2. Retention of urine. 3. Dysuria. 4. Diarrhoea. 5. Diabetes. 6. Worms. 7. Colic. 8. Phthisis.	Leaves, flowers, seeds and gum.	
65	अमलतास	Cassia fistula	"	1. Purgative 2. Dyspepsia.	Bark, leaves, fruit, flowers, and roots	
66	पवांड	Cassia tora	"	1. Skin diseases	Seeds, leaves, and roots.	
67	इमली	Tamarindus indica	"	1. Bilious vomitting 2. Dysentery 3 Gonorrhea	Leaves, seeds, pulp and flowers.	
68	घास	Hordeum vulgare	Gramineae	1. Nutritious 2. Demulcent used in lung diseases. 3. Bronchial affections. 4. Cholera 5. Urinary disorder. 6. Fever.	Seed.	
69	रोहिड़ा घास	Gymbopogon martini.	"	1. Diaphoretic 2. Antispasmodic. 3. Carminative. 4. Cholera. 5. Ambrocation. 6. Rheumatism. 7. Baldness. 8. Nouralgia.	Oil extracted out of it.	
70	खस खस	Veriveria zizaniodes	Gramineae	1. Antispasmodic 2. Diaphoretic. 3. Erumonagogu used in fever. 4. Deranged Menstruation. 5. Convulsions. 6. Rheumatism and Gout. 7. Hysteria.	Roots.	

S. No. (1)	Local Name (2)	Botanical Name (3)	Natural Order (4)	Used in diseases (5)	Particular parts used (6)	Remarks (7)
71	थूंहा थूर	Euphorbia nerufolia	Euphorbiaceae	1. Hooping cough 2. Asthma. 3. Dropsy. 4. Enlarged liver and spleen. 5. Jaundice. 6. Colic. 7. Snake bite.	Juice & root.	
72	आंवला	Phyllanthus emblica		1. Chronic constipation 2. Diuretic. 3. Ingredient of Triphla.	Fruit, flower, root & lozaes.	
73	खटमीठी (चूका की भाजी)	Oxalis corni-culata	Geraniaceae	1. Intoxication from Datura 2. Refrigerant. 3. Antiscorbutic.	Whole plant.	
74	दूब	Cynodon Dactylon	Gramineae	1. Astringent 2. Demulcent. 3. Checking vomitting. 4. Dysuria. 5. Bleeding from wounds.	Whole herb.	

ANNEXURE

Districts of Rajasthan and

Serial No.	State and District.		Area in sq. Miles	Population 1951	Density	1941—51	
						P. C. Growth rate	Mean to growth rate
	(1)		(2)	(3)	(4)	(5)	(6)
1	Rajasthan State	.. ..	130,206·7	15,209,797	117	14·9	13·9
2	Jaipur	District	6,295·4	1,656,097	263	28·3	24·8
3	Tonk	,, ...	3,581·6	4,00,947	112	23·5	21·0
4	Sawaimadhopur	,, ...	4,203·8	765,172	182	12·1	11·4
5	Bharatpur	,, ...	3,132·6	907,309	290	5·3	5·2
6	Alwar	,, ...	3,215·3	861,993	266	2·0	1·9
7	Jhunjhunu	,, ...	2,310·5	588,621	255	19·9	18·1
8	Sikar	,, ...	2,941·9	677,782	230	10·0	9·6
9	Bhilwara	,, ...	4,671·5	727,356	156	15·3	14·2
10	Bikaner	,, ...	8,446·6	330,329	39	8·7	8·4
11	Churu	,, ...	6,512·4	523,276	80	15·0	13·9
12	Ganganagar	,, ...	8,225·0	630,130	77	18·0	16·5
13	Jodhpur	,, ...	9,434·4	691,786	73	20·6	18·7
14	Barmer	,, ...	10,150·5	441,368	43	21·5	19·4
15	Jalore	,, ...	4,923·6	459,467	93	15·0	13·9
16	Pali	,, ...	4,750·7	660,856	139	18·9	17·3
17	Nagaur	,, ...	6,898·8	763,829	111	16·4	15·1
18	Jaisalmer	,, ...	15,967·5	102,743	6	10·2	9·7
19	Udaipur	,, ...	6,957·5	1,191,232	171	7·6	16·2
20	Dungarpur	,, ...	1,466·3	308,243	210	12·4	11·7
21	Banswara	,, ...	1,953·8	356,559	182	18·9	17·3
22	Sirohi	,, ...	1,671·1	237,362	142	20·3	18·4
23	Chittorgarh	,, ...	3,231·2	587,724	182	12·8	12·1
24	Kotah	,, ...	4,784·6	766,198	160	5·4	5·2
25	Bundi	,, ...	2,138·9	280,518	131	12·5	11·8
26	Jhalawar	,, ...	2,311·2	373,810	162	7·7	7·4
27	Ajmer State	.. ..	2,416·6	693,372	287	18·8	7·2

Ajmer compared with respect to certain Demographical Features.

No. of Tehsils	Average		Rainfall in inches	Sex Ratio	Literacy per cent.			Serial No.
	Area of Tehsil	Population of Tehsil			Persons	Males	Females	
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
207*	629	73,869	20·86	921	8	14	3	1
17	370	97,417	21·19	919	11	18	4	2
6	597	66,825	22·78	925	7	11	2	3
12	350	63,764	25·94	879	6	11	1	4
12	261	75,617	25·93	835	9	15	2	5
9	361	95,777	23·02	896	9	15	3	6
5	462	117,724	17·31	956	11	17	3	7
6	490	98,104	20·09	972	8	14	2	8
15	311	48,490	23·20	934	7	12	2	9
4	2112	82,582	10·54	929	11	17	5	10
7	930	74,754	12·30	939	10	15	5	11
9	914	70,014	9·36	836	8	13	3	12
4	2359	172,947	12·01	899	12	19	5	13
4	2538	110,342	11·01	8[illegible]9	6	1	1	14
3	1641	153,156	14·88	913	4	7	1	15
6	792	110,143	18·19	946	7	12	2	16
5	1380	152,766	15·22	936	6	10	2	17
5	3194	20,549	5·65	813	4	7	1	18
18	387	66,180	24·51	960	8	13	3	19
3	489	102,748	27·86	1003	5	9	1	20
5	391	71,313	34·46	953	5	8	2	21
5	334	47,472	19·83	973	7	12	2	22
14	231	41,980	28·64	958	7	12	2	23
10	262	40,326	33·46	926	11	18	4	24
5	428	56,104	27·51	913	6	10	2	25
9	257	41,634	36·70	952	8	13	2	26
3	809	231,124	20·77	925	20	30	1[illegible]	27

*Subsequently certain Tehsils were abolished.

ANNEXURE VII.

Statement showing average annual rainfall in some parts of Rajasthan and Ajmer States between 1940 and 1951 (inches and cents.)

(Prepared from the reports received from District Officers)

Serial No.	Name of place	Years											
		1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
	EAST RAJASTHAN PLAIN DIVISION.												
1	Alwar	..	..	..	..	..	24·67	26·12	28·01	25·73	20·63	26·68	..
2	Sawai Madhopur ..	..	..	..	..	29·10	35·11	34·3	27·3	27·8	22·5	28·1	..
3	Jhunjhunu	..	..	..	..	..	..	..	..	..	..	..	..
4	Bhilwara	..	..	..	..	..	..	..	..	16·5	27·6	..	..
	RAJASTHAN DRY AREA DIVISION.												
5	Jodhpur	..	..	..	..	..	..	..	..	..	..	..	..
6	Bikaner	6·10	19·49	6·0	10·85	10·50	6·49	6·49	10·27	4·05	9·12	12·46	..
7	Jaisalmer	..	..	..	..	..	12·89	5·6	10·09	10·36	10·19	14·44	..
8	Jalore	..	..	..	..	..	..	..	..	11·0	17·0	11·0	..
9	Barmer	..	..	..	..	..	..	..	..	..	7·93	8·76	..
	RAJASTHAN HILLS DIVISION.												
10	Udaipur	..	..	..	..	..	29·65	26·64	16·25	15·94	33·5	..	..
11	Sirohi	..	..	..	..	..	34·73	21·85	20·78	19·34	20.47	38·26	..
12	Dungarpur	..	32·93	27·46	43·58	30·56	32·83	21·32	13·98	21·1	43·8	16·9	..
13	Banswara	..	..	..	..	..	..	..	..	..	28·27	53·74	19·42
	RAJASTHAN PLATEAU DIVISION.												
14	Bundi	..	..	..	..	..	42·64	41·99	38·97	26·44	23·53	29·96	..
	AJMER DIVISION.												
15	Ajmer State ..	..	..	..	..	..	19·48	19·11	24·44	10·11	15·33	..	..
	JHUNJHUNU DISTRICT.												
16	Jhunjhunu Tehsil ..	..	..	..	..	11·62	16·30	17·20	26·10	13·5	9·39	19·2	6·67
17	Khetri Tehsil	..	..	..	..	..	..	..	..	..	..	23·18	7·53
18	Chirawa Tehsil ..	..	11·28	29·70	16·52	14·81	19·49	17·79	15·19	15·67	10·8	14·96	7·50
19	Ajitgarh Tehsil ..	9·37	10·66	34·33	11·10	14·56	14·13	19·97	14·17	10·57	11·50	15·35	6·10
20	Udaipur (Wati) Tehsil ..	22·58	27·39	23·22	16·4	16·90	11·70	23·1	15·80	18·20	15·75	21·36	8·57

JODHPUR.

Average rainfall of the following places during the last five years *i.e.* from 1946 to 1951.

1. ehsil Jodhpur 10·89. 2 Tehsil Bilara 10·65 3. Tehsil Phalodi 7·3. 4. Tehsil Shergarh 6·77.

ANNEXURE VIII.

Statement showing normal rainfall at different places in Rajasthan and Ajmer States in inches from decade to decade. (Prepared from previous Census Reports.)

Name of place	1911	1921	1931	1941	1951	
Alwar	28·45	28·41	21·65	29	23·02	
Bharatpur	25·76	26·26	25·02	27	25·90	
Bundi	24·17	26·16	27·95	28	27·51	
Dholpur	25·42	29·21	26·49	29	See Bharatpur.	
Jaipur	27·42	23·45	23·60	24	21·19	
					Sawai Madhopur.	25·94
					Sikar.	20·00
					Jhunjhunu.	17·1
Jhalawar	36·90	37·63	33·63	31	38·70	
Karauli	27·87	27·50	26·48	28	See Bharatpur.	
Kishangarh	20·38	21·19	20·03	22	See Jaipur.	
Kotah	30·44	29·55	33·42	25	33·46	
Lawa	See Tonk	13·73	19·42	19	See Tonk	
Shahpura	26·43	23·00	27·62	25	See Bhilwara	
Tonk	24·18	24·43	32·67	25	22·78	
Banswara	38·29	37·65	33·80	38	34·46	
Dungarpur	26·19	24·24	29·60	25	27·[illegible]	
Partabgarh ..	31·35	30·62	33·71	22	See Chittorgarh	
Kushalgarh	31·47	34·66	35·41	35	See Banswara	
Udaipur	24·06	23·27	24·05	25	24·90	
					Bhilwara	25·90
					Chittorgarh	25·44
Sirohi	20·83	20·68	24·95	21	19·83	
Bikaner	11·62	11·09	10·44	12	10·51	
					Churu	12·27
					Ganganagar	9·26
Jaisalmer . ..	6·71	6·84	5·91	7	2·65	
Jodhpur	13·54	10·94	14·54	16	8·90	
					Barmer	11·01
					Jalore	14·[illegible]
					Pali	15·14
					Nagaur	15·21
Ajmer—Merwara ..	19·44	19·39	19·52	21	20·27	

ANNEXURE IX (a)

Station—AJMER.

Climatological Table.

Lat. 26° 27′N. Long. 74° 37′ E. Height above M.S.L. 1,593 Ft Based on observations from 1881 to 1940.

Month		Pressure: Mean at station level	Air Temperature: Mean Dry Bulb	Air Temperature: Mean Wet Bulb	Air Temperature: Mean [of] Daily Max.	Air Temperature: Mean [of] Daily Min.	Air Temperature: Mean [of] Highest in the month	Air Temperature: Mean [of] Lowest in the month	Air Temperature: Extreme Highest recorded	Air Temperature: Extreme Date and year	Air Temperature: Extreme Lowest recorded	Air Temperature: Extreme Date and year	Humidity: Relative Humidity	Humidity: Vapour Pressure.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		mb.	°F.	°F.	°F.	°F.	°F.	°F.	°F.		°F.		%	mb.
JANUARY	I	961·8	47·9	42·3	72·7	45·7	81·2	36·5	89	28	27	16	59	8·0
	II	959·3	69·2	53·3	..	..	..	..	..	1902	..	1935	32	7·6
FEBRUARY	I	959·9	52·1	45·4	77·0	49·9	87·0	34·3	95	27	30	1	55	8·4
	II	957·3	73·9	56·3	..	..	..	..	..	1887	..	1905	29	8·0
MARCH	I	957·8	64·3	52·3	87·7	60·2	97·3	48·2	107	27	36	4	39	9·7
	II	954·9	82·9	60·0	..	..	..	..	..	1892	..	1893	22	8·2
APRIL	I	954·8	76·8	60·3	97·3	71·5	103·9	59·4	110	28	49	3	33	12·5
	II	951·6	93·9	64·4	..	..	..	..	..	1898	..	1886	15	8·1
MAY	I	951·4	84·0	63·6	102·9	80·2	109·1	69·2	114	16	60	1	42	18·0
	II	948·2	102·0	71·9	..	..	..	..	..	1912	..	1881	20	13·8
JUNE	I	947·5	84·5	74·1	100·4	81·9	103·0	73·0	114	11	66	15	59	24·2
	II	944·2	95·8	75·2	..	..	..	..	..	1901	..	1930	37	20·8
JULY	I	946·2	80·2	74·9	91·7	78·4	100·4	73·3	112	5	68	5	77	27·0
	II	943·6	91·6	76·5	..	..	..	..	..	1901	..	1931	56	25·1
AUGUST	I	948·4	77·5	73·1	87·7	76·0	94·5	72·8	104	28	69	24	80	26·4
	II	945·9	87·8	75·1	..	..	..	..	..	1883	..	1935	55	24·1
SEPTEMBER	I	952·6	76·3	69·6	90·0	74·5	96·4	68·6	105	11	61	24	70	23·9
	II	949·9	89·1	72·7	..	..	..	..	..	1915	..	1885	45	20·2
OCTOBER	I	957·8	69·6	59·1	91·5	64·6	96·0	55·0	102	10	46	25	50	14·7
	II	955·0	89·2	69·5	..	..	..	..	..	1899	..	1889	22	10·2
NOVEMBER	I	961·1	56·3	48·7	83·6	52·7	90·3	44·5	95	1	37	18	54	9·9
	II	958·5	79·1	580·	..	..	..	..	..	1901	..	1926	25	8·3
DECEMBER	I	962·4	49·1	43·5	75·4	46·6	82·4	39·1	88	2	33	28	60	8·4
	II	960·0	71·1	54·9	..	..	..	..	..	1899	..	1936	30	7·7
Annual Total or Mean	I	955·1	68·2	59·3	88·2	65·2	110·1	35·7	114	..	27	..	57	15·9
	II	952·4	85·3	65·3	..	..	..	..	..	..	..	..	32	13·5
No. of Years	I	50	50	50	60	60	60	60	60	..	60	..	50	50
	II	..	5	5	..	..	..	..	..	..	..	..	5	5

Climatological Table.

Station—AJMER—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 Hrs.	Rainfall: Date and Year	Mean wind speed	Weather Phenomena*: No. of days with: Precipitation "01" or more	Thunder	Hail	Dust storm.	Squall	Fog.
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenths of Sky		in.		in.	in.	in.		m.p.h.						
JANUARY	I	2·4	0·3	0·37	1·0	2·79	0	1·50	25	1·6	1·8	0·9	0·2	0	0	0·7
	II	3·5	0·3	..	..	1910	..	..	1893	..	..	..	..	..	..	..
FEBRUARY	I	2·1	0·3	0·26	0·7	2·22	0	1·30	18	2·1	2·0	1·0	0	0·1	0·1	0
	II	3·2	0·8		..	1888	..	..	1907	..	..	..	..	..	..	..
MARCH	I	1·8	0·1	0·23	0·7	2·05	0	1·67	25	3·2	1·2	1·1	0·1	0	0	0
	II	2·8	0·7		..	1932	..	..	1932	..	..	..	..	..	..	..
APRIL	I	1·7	0·1	0·15	0·4	2·80	0	1·50	23	4·5	0·9	1·9	0	0·1	0·2	0
	II	2·6	0·8	..	..	1909	..	..	1909	..	..	..	..	..	..	..
MAY	I	1·2	0·1	0·64	1·5	3·31	0	1·70	31	6·5	1·6	3	0	0·9	0·5	0
	II	1·3	0·8	..	..	1917	..	..	1925	..	..	..	..	..	..	..
JUNE	I	2·8	1·6	2·43	2·7	9·01	0	4·70	17	7·3	5	5	0	1·8	0·6	0
	II	3·8	1·9	..	..	1933	..	..	1917	..	..	..	..	..	..	..
JULY	I	6·0	3·7	6·41	8·9	17·15	0·34	4·88	28	6·0	12	7	0	0·1	0	0
	II	7·0	3·1	..	..	1929	1911	.	1933	..	..	..	..	..	..	..
AUGUST	I	6·3	3·1	6·75	8·4	10·90	0.10	3	31	5·1	10	3	0	0	0	0
	II	6·8	2·9	..	..	1917	1899	..	1928	..	..	..	..	..	..	..
SEPTEMBER	I	3·5	1·5	2·70	4·0	11·25	0	6·15	11	4·1	6	4	0	0	0	0
	II	3·5	2·0	..	..	1917	..	..	1924	..	..	..	..	..	..	..
OCTOBER	I	1·1	0	0·38	0·7	3·24	0	1·85	21	2·1	0·6	0·8	0	0	0	0
	II	0·9	0·6	..	..	1931	..	..	1886	..	..	..	..	..	..	..
NOVEMBER	I	1·0	0·3	0·19	0·4	1·86	0	1·30	20	1·2	0·7	0.2	0	0	0·1	0
	II	1·8	0·3	..	..	1893	..	..	1893	..	..	..	..	..	..	..
DECEMBER	I	1·7	0·2	0·26	0·4	3·31	[illegible]	2·[illegible]3	5	1·2	0·7	0·7	0	0	0·1	0·1
	II	2·5	0·2	.	..	1891		..	1913	..	..	..	..	..	..	..
Annual Total or Mean	I	2·6	0·9	20·77	29·8	48·30	·83	0·48	..	3·7	43	29	0·3	3	1·6	0·8
	II	3·4	1·2		.	1917	1918	..	..	..	..	..	..	..	..	..
No. of Years	I	70	5	60	60	60	60	60	..	60	10	10	10	10	10	10
	II	8	5	..	..	..	..	..	..	..	.	..	..	..	..	..

*Frequencies above 2·0 are given only in whole numbers

Climatological Table.

Station—AJMER—(*Contd.*)

Month		Wind: No. of days wind with force 8 or more	4—7	1—3	0	Percentage No. of days of wind from N	NE	E	SE	S	SW	W	NW	Calm	Cloud: No. of days with cloud amount (All clouds) 0	T—3	4—6	7—9	10 over cast
(1)		(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
JANUARY	I	0	0	6	25	3	5	1	4	1	3	1	7	76	11	9	3	5	3
	II	0	0	14	17	6	7	3	6	2	2	10	8	56	9	9	4	6	3
FEBRUARY	I	0	0	6	22	3	8	1	4	1	3	3	4	72	10	10	2	3	3
	II	0	1	16	11	6	3	4	4	5	8	16	14	39	8	9	5	4	2
MARCH	I	0	1	15	15	2	12	0	5	3	10	5	4	60	16	7	4	2	2
	II	0	1	24	6	7	3	1	3	4	17	30	16	19	12	9	5	3	2
APRIL	I	0	1	19	10	1	9	1	5	3	19	16	7	40	17	9	2	1	1
	II	0	3	22	5	5	1	1	1	1	20	40	15	17	11	9	4	4	2
MAY	I	0	10	19	2	1	5	0	3	3	21	36	11	20	21	7	1	1	1
	II	0	4	26	1	1	1	0	0	1	26	55	11	6	15	10	3	2	1
JUNE	I	0	12	13	5	1	2	1	2	1	24	42	19	9	10	8	3	5	4
	II	0	5	21	4	4	5	3	3	2	19	41	9	14	9	9	2	5	5
JULY	I	0	9	17	5	1	4	1	2	2	26	39	16	9	1	6	6	8	10
	II	0	2	20	9	1	3	1	1	3	22	35	6	28	1	6	5	7	12
AUGUST	I	0	7	20	4	1	2	2	3	1	25	39	15	12	0	7	6	11	7
	II	0	1	22	8	2	4	2	0	1	24	38	4	24	1	5	7	8	10
SEPTEMBER	I	0	3	18	9	0	4	1	2	1	20	37	15	20	6	14	3	5	2
	II	0	1	19	10	1	3	5	2	1	17	31	7	33	4	14	5	4	3
OCTOBER	I	0	0	9	22	0	3	0	2	2	10	13	8	61	21	8	1	1	0
	II	0	0	16	15	5	4	1	2	0	4	21	15	48	14	15	1	1	0
NOVEMBER	I	0	0	2	28	1	3	1	2	1	1	2	5	83	18	8	1	2	1
	II	0	0	0	21	3	5	3	1	0	3	8	9	69	15	9	2	3	1
DECEMBER	I	0	0	2	29	3	5	0	2	0	1	0	5	82	14	10	3	3	1
	II	0	0	0	22	5	3	3	3	3	1	5	7	72	8	13	3	5	1
Annual Total or Mean	I	0	43	146	176	1	5	1	3	2	14	19	10	45	145	103	35	47	35
	II	0	18	218	129	4	3	2	2	2	14	28	10	35	108	117	46	52	42
No. of Years	I		5							20							5		
	II		5							5							5		

Climatological Table.

Station—AJMER (*Concld.*)

Month		Cloud—(Contd.) No. of days with Low cloud amount						Visibility* No. of days with visibility				
		0	T—3	4—6	7—9	10	Fog 10	Upto 1,100 yds.	1,100 yds. to 2·5 miles	2·5 to 6·25 miles	6·25 to 12·5 miles	Over 12·5 miles
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	29	1	0	1	0	0	0·1	4	15	11	0.7
	II	28	2	1	0	0	0	0	0	0·3	23	8
FEBRUARY	I	27	1	0	0	0	0	0·3	3	11	12	..
	II	22	3	2	0	1	0	0	0·4	1·3	19	..
MARCH	I	30	1	0	0	0	0	0	1·0	6	20	4
	II	24	5	2	0	0	0	0	0	1·0	21	9
APRIL	I	29	0	0	0	1	0	0	0·9	5	19	5
	II	22	6	2	0	0	0	0	0·4	1·1	19	9
MAY	I	31	0	0	0	0	0	0	1·1	3	23	4
	II	23	5	1	1	0	0	0	0·5	1·5	21	8
JUNE	I	20	5	1	2	2	0	0·1	0·5	5	18	6
	II	16	7	3	2	2	0	0·4	0·9	4	17	8
JULY	I	10	7	5	4	5	0	0	0·6	4	20	6
	II	9	11	6	2	3	0	0	0·3	4	15	12
AUGUST	I	9	10	6	3	3	0	0·1	1·5	3	19	7
	II	8	13	5	3	2	0	0	0·7	2	17	11
SEPTEMBER	I	18	6	2	2	2	0	0	0·5	1·7	20	8
	II	12	14	2	1	1	0	0	0·1	1·1	18	11
OCTOBER	I	30	1	0	0	0	0	0	0·7	3	20	7
	II	29	10	1	0	0	0	0	0	0·4	19	12
NOVEMBER	I	24	1	0	0	1	0	0	1·1	11	15	3
	II	26	3	1	0	0	0	0	0	0·1	13	12
DECEMBER	I	30	0	1	0	0	0	0·1	5	12	14	0
	II	28	2	1	0	0	0	0	0	0·3	17	11
Annual Total or Mean	I	291	34	15	12	14	0	1·0	20	10	211	53
	II	254	62	27	9	9	0	0·1	3	17	124	121
No. of days	I				5					8		
	II				5					8		

*Frequencies above 20 are given only in whole numbers.

ANNEXURE IX (b)

Climatological Table.

Station—JAIPUR
Lat. 26° 55′ N Long. 75° 50′ E. Height above M. S. L. 1,431 ft. Based on observations from 1881 to 1940.

Month		Pressure	Air Temperature										Humidity	
					Mean (of)		Mean (of)		Extreme.					
		Mean at station level	Mean Dry Bulb	Mean Wet Bulb	Daily Max.	Daily Min	Highest in the month	Lowest in the month	Highest recorded	Date and year	Lowest recorded	Date and year	Relative Humidity	Vapour pressure
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		mb.	°F.	°F.	°F.	°F.	°F.	°F.	°F.		°F.		%	mb.
JANUARY	I	967·5	51·7	45·6	73·2	46·8	82·0	36·3	89	31	28	31	59	7·8
	II	965·2	69·7	53·7	..	..	..	..	..	1932	..	1905	29	7·1
FEBRUARY	I	965·5	56·1	48·1	77·0	50·6	88·2	40·3	96	26	28	1	51	7·9
	II	963·1	71·4	56·5	..	..	..	..	..	1934	..	1905	28	7·8
MARCH	I	963·3	67·9	54·0	88·3	55·8	99·3	48·9	109	27	38	4	38	8·2
	II	960·5	83·2	59.1	..	..	..	..	..	1892	..	1898	18	6·7
APRIL	I	960·0	79·6	61·8	98·2	68·8	107·1	60·1	112	29	49	1	31	10·3
	II	956·8	94·8	63·1	..	..	..	..	..	1914	..	1905	10	6·2
MAY	I	956·5	86·3	68·7	105·6	76·9	112·4	68·3	118	25	60	17	37	15·0
	II	953·1	105·9	69·6	..	..	..	..	..	1932	..	1920	13	9·8
JUNE	I	952·4	87·4	74·5	103·1	80·4	111·5	73·2	117	10	69	4	52	22·2
	II	949·1	98·7	74·9	..	..	..	..	..	1897	..	1934	35	19·8
JULY	I	951·5	81·8	76·2	94·2	78·2	104·1	73·5	116	5	69	5	76	27·8
	II	948·7	90·3	77·3	..	..	..	..	..	1901	..	1931	56	26·0
AUGUST	I	953·7	79·4	75·1	90·9	75·9	97·6	72·6	107	1	70	27	81	27·4
	II	951·0	88·8	76·8	..	..	..	..	..	1911	..	1929	58	25·8
SEPTEMBER	I	958·0	78·4	72·2	93·1	72·8	99·5	68·3	107	11	64	30	73	23·3
	II	955·0	90·8	73·9	..	..	..	..	..	1899	..	1934	44	20·9
OCTOBER	I	963·3	74·1	62·6	94.1	64·3	98·8	56·4	104	5	52	30	49	13·9
	II	960·5	90·6	65·8	..	..	..	..	..	1899	..	1938	22	10·7
NOVEMBER	I	960·7	63·6	53·9	85·4	53·7	92·0	46·5	97	2	38	30	49	9·4
	II	964·1	80·4	60·1	..	..	..	..	..	1909	..	1934	25	8·8
DECEMBER	I	968·1	53·8	47·3	76·4	47·6	83·5	40·0	88	1	35	28	58	8·2
	II	965·8	71·7	55·8	..	..	..	..	..	1901	..	1938	31	8·3
Annual Total or Mean	I	960·5	71·7	61·7	89·9	64·6	113·2	35·7	118	..	28	..	55	15·2
	II	957·7	86·3	65·5	..	..	..	..	..	..	..	..	31	13·2
No. of Years	I	50	50	50	50	50	50	50	50	..	50	..	50	50
	II	..	5	5	..	..	..	..	..	..	..	..	5	5

Climatological Table

Station—JAIPUR—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hours	Rainfall: Date and year	Mean wind speed	Weather Phenomena*: No. of days with: Precipitation ·01" or more	Thunder	Hail	Dust storm	Squall	Fog
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	
		Tenths of sky.		in.		in.	in.	in.		m. p. h.						
JANUARY	I	2·7	0·6	0·44	1·0	2·57	0	1·15	23	3·5	1·0	1·0	0·1	0	0	0·2
	II	3·0	0·5	—	..	1892	..	..	1892	..	..	..	..	..	..	..
FEBRUARY	I	2·6	0·8	0·32	0·8	2·28	0	1·47	18	3·9	3	1·9	0	0·1	0	0·1
	II	3·1	0·9	..	..	1907	..	..	1907	..	..	..	..	..	..	..
MARCH	I	2·1	0·4	0·34	0·9	2·02	0	1·33	14	4·3	1·6	1·6	0·3	0·3	0·4	0
	II	2·5	1·1	..	..	1926	..	..	1926	..	..	..	..	..	..	..
APRIL	I	1·8	0·1	0·17	0·5	2·48	0	0·70	22	4·6	3	1·7	0·7	0·8	0·5	0
	II	1·6	0·6	..	..	1909	..	..	1929	..	..	..	..	..	..	..
MAY	I	1·3	0	0·57	1·6	2·91	0	1·19	18	5·4	2	6	0·2	3	0·4	0
	II	1·4	0·9	..	..	1900	..	..	1930	..	..	..	..	..	..	..
JUNE	I	2·7	1·5	2·24	3·9	11·69	0·03	3·43	16	5·9	3	9	0	2	0·5	0
	II	3·8	2·1	..	..	1933	1918	..	1920	..	..	..	..	..	..	..
JULY	I	6·5	3·1	7·74	10·3	17·78	0·40	6·53	16	5·0	16	11	0	0	0·1	0
	II	7·0	3·6	..	..	1920	1905	..	1883	..	..	..	..	..	..	..
AUGUST	I	6·8	3·2	8·06	10·2	21·83	0	7·05	6	4·5	11	7	0	0	0·1	0·1
	II	7·1	3·0	..	..	1892	..	..	1932	..	..	..	..	..	..	..
SEPTEMBER	I	3·5	1·4	3·22	1·7	16·54	0	7·38	10	1·0	7	5	0	0·1	0·6	0
	II	3·5	2·2	..	..	1924	..	..	1924	..	..	..	..	..	..	..
OCTOBER	I	1·2	0·1	0·18	0·7	4·01	0	4·50	14	3·2	0·6	0·2	0	0	0·1	0
	II	0·8	0·6	..	..	1924	..	..	1924	..	..	..	..	..	..	..
NOVEMBER	I	0·9	0·3	0·14	0·3	2·49	0	1·27	20	2·8	0·4	0·2	0	0	0	0
	II	1·2	0·3	..	..	1893	..	..	1893	..	..	..	..	..	..	..
DECEMBER	I	1·9	0·4	0·39	0·7	2·21	0	1·03	9	3·1	1·2	1·0	0·1	0	0·1	0
	II	2·4	0·6	..	..	1924	..	..	1924	..	..	..	..	..	..	..
Annual Total or Mean	I		1·0	24·02	[illegible]	55·27	1·73	7·33	..	4·2	59	46	1·4	6	3	0·4
	II	2·1	1·1		..	1892	[illegible]	..	..	..	..	..	..	..	..	..
No. of Years	I	[illegible]	5	60	60	60	61	60	..	60	10	10	10	10	10	10
	II	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

* Frequencies above 20 are given only in whole numbers.

Climatological Table.

Station—JAIPUR—(*Contd.*)

Month		Wind: No. of days with wind force: 8 or more	4—7	1—3	0	Percentage No. of days of Wind from: N	NE	E	SE	S	SW	W	NW	Calm	Cloud: No. of days with cloud amount (All clouds): 0	T—3	4—6	7—9	10 overcast
(1)		(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
JANUARY	I	0	1	22	8	11	14	16	9	5	9	12	19	5	12	10	3	3	3
	II	0	0	26	5	10	6	12	6	5	8	10	27	16	9	10	4	6	2
FEBRUARY	I	0	1	20	7	12	13	10	7	6	10	15	24	3	11	10	1	2	4
	II	0	2	24	2	9	4	11	5	6	14	18	24	8	7	10	4	4	3
MARCH	I	0	1	23	7	8	7	8	7	7	14	21	25	2	17	7	2	3	2
	II	0	3	26	2	5	1	5	1	4	19	27	30	7	11	11	3	3	3
APRIL	I	0	0	23	7	6	6	5	5	5	16	30	27	1	19	8	1	1	1
	II	0	3	25	2	1	1	1	2	1	23	35	30	7	12	13	2	2	1
MAY	I	0	4	24	3	4	4	3	3	5	18	35	27	1	23	7	1	0	0
	II	0	4	27	0	5	1	1	0	1	17	48	25	3	13	13	2	2	1
JUNE	I	0	5	22	3	6	7	6	3	3	18	33	23	2	12	8	2	5	3
	II	0	4	23	3	6	11	8	5	0	15	28	20	7	7	11	3	4	5
JULY	I	0	4	24	3	5	9	10	5	4	19	29	18	2	3	6	5	8	9
	II	0	2	25	4	8	10	8	1	6	23	25	7	12	1	6	3	10	11
AUGUST	I	0	2	27	2	5	8	9	4	3	18	29	22	3	2	9	6	8	6
	II	0	1	27	3	1	8	8	5	5	32	22	11	8	0	6	4	10	11
SEPTEMBER	I	0	1	24	5	8	10	8	3	2	9	25	32	2	10	12	3	3	2
	II	0	0	27	3	9	13	7	4	2	15	25	17	9	4	14	5	4	3
OCTOBER	I	0	0	20	11	11	10	6	3	3	8	21	31	5	23	7	0	0	1
	II	0	0	27	4	13	6	2	5	2	8	27	30	13	14	15	1	1	0
NOVEMBER	I	0	0	14	16	12	12	10	6	4	9	14	25	9	20	8	0	1	1
	II	0	0	24	6	13	5	4	1	1	6	17	33	20	16	8	3	2	1
DEC MBER	I	0	0	19	12	11	13	13	7	5	10	13	20	7	14	11	3	2	1
	II	0	0	25	6	12	5	8	4	5	7	9	29	21	11	12	2	5	1
Annual Total or Mean	I	0	19	262	84	8	9	9	5	4	13	22	23	7	166	103	27	36	33
	II	0	19	306	40	8	6	6	3	3	16	24	23	11	105	120	36	53	42
No. of Years	I		5							40							5		
	II		5							5							5		

Climatological Table.

Station—JAIPUR—(*Concld.*)

Month.		Cloud (Contd.) No. of days with Low cloud amount: 0	T—3	4—6	7—9	10	Fog 10	Visibility.* No. of days with visibility: Upto 1,100 Yds.	1,100 yds. to 2·5 mls.	2·5 to 6·25 mls.	6·25 to 12·5 mls.	Over 12·5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	27	1	1	1	1	0	0.3	2	3	12	13
	II	21	5	1	1	0	0	0	0·1	0	1·3	30
FEBRUARY	I	25	1	0	0	1	1	0	2	3	9	14
	II	17	3	1	1	1	0	0	0·6	0·5	1·7	25
MARCH	I	23	1	0	1	1	0	0	3	1·7	7	19
	II	22	5	2	1	1	0	0	0	0·9	2	28
APRIL	I	30	0	0	0	0	0	0·1	1·3	2	10	17
	II	19	10	1	0	0	0	0	0·7	1·0	3	25
MAY	I	28	3	0	0	0	0	0·4	4	8	9	10
	II	17	12	1	1	0	0	0·1	0·9	3	9	18
JUNE	I	20	7	1	1	1	0	0·3	1·5	7	10	11
	II	9	13	4	3	1	0	0·7	1·4	3	9	16
JULY	I	10	10	3	4	4	0	0	1·1	3	9	18
	II	5	12	6	4	4	0	0.3	0·4	1·3	6	23
AUGUST	I	12	9	4	4	2	0	0·1	1·5	1·2	7	21
	II	3	11	6	5	3	0	0	0·5	0·7	3	27
SEPTEMBER	I	20	5	2	1	2	0	0	0·5	0·5	4	25
	II	5	17	5	2	1	0	0·1	0·5	0·1	0·9	23
OCTOBER	I	20	1	0	0	0	0	0	0·5	0·3	6	24
	II	19	12	0	0	0	0	0	0	0·1	0·1	31
NOVEMBER	I	29	1	0	0	0	0	0	0·6	3	8	19
	II	27	3	0	0	0	0	0	0	0·1	0·4	30
DECEMBER	I	27	3	0	1	0	0	0	3	3	15	10
	II	26	4	0	1	0	0	0	0·1	0·1	0·4	30
Annual Totals or Mean	I	296	42	11	13	12	1	1·2	21	36	106	201
	II	193	115	27	19	11	0	1·2	5	11	37	311
No. of Years.	I			5						8		
	II			5						8		

* Frequencies above 2·0 are given only in whole numbers.

Average Rainfall (in Cents)

Based on data upto the end of 1940

		Ambar	Tonk	Malarna	Bharatpur	Alwar	Sikar	Shahpura	Jhunjhunu
ANNUAL	..	02296	02511	02345	02637	02739	01695	02519	01574
JANUARY	..	44	27	16	43	48	36	16	46
FEBRUARY	..	0028	0025	0041	0047	0050	0033	0018	0030
MARCH	..	21	18	34	33	33	30	19	28
APRIL	..	0011	0009	0025	0020	0019	0011	0014	0021
MAY	..	45	41	10	49	76	64	5 7	51
JUNE	..	0265	0267	0285	0243	0292	0184	0295	0196
JULY	..	732	907	910	820	801	499	828	516
AUGUST	..	0895	0824	0683	0817	0807	0580	0828	0430
SEPTEMBER	..	135	307	305	468	501	193	371	198
OCTOBER	..	0058	0052	0015	0058	0061	0024	0047	0024
NOVEMBER	..	18	13	..	8	13	14	14	9
DECEMBER	..	0044	0021	21	0031	0038	0027	0019	0025

ANNEXURE IX (c)

Climatological Table.

Station - BIKANER
Lat. 28° 00′ N Long. 73° 18′ E. Height above M.S.L. 734 Ft. Based on observations from 1881 to 1940

Month		Pressure: Mean at station level	Air Temperature: Mean Dry Bulb	Air Temperature: Mean Wet Bulb	Air Temperature: Mean (of) Daily Max.	Air Temperature: Mean (of) Daily Min.	Air Temperature: Mean (of) Highest in the month	Air Temperature: Mean (of) Lowest in the month	Air Temperature: Extreme Highest recorded	Air Temperature: Extreme Date and year	Air Temperature: Extreme Lowest recorded	Air Temperature: Extreme Date and year	Humidity: Relative Humidity	Humidity: Vapour Pressure
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		mb.	°F	°F	°F	°F	°F	°F	°F		°F		%	mb.
JANUARY	I	991·5	13·4	42·0	71·7	46·9	81·2	39·4	88	31	30	16	58	7·2
	II	989·1	70·3	53·7	..	..	..	..	..	1932	..	1935	27	8·1
FEBRUARY	I	989·0	53·5	46·6	76·9	51·6	87·8	42·3	98	28	31	1	55	7·8
	II	986·3	76·8	57·5	..	..	..	..	..	1928	..	1929	27	8·3
MARCH	I	986·9	65·4	54·5	88·7	62·4	99·6	51·4	109	21	31	4	45	9·9
	II	983·2	84·4	59·2	..	..	..	..	..	1924	..	1908	15	6·4
APRIL	I	983·2	78·2	63·4	99·5	73·3	108·1	63·0	117	21	48	7	40	13·1
	II	979·1	95·7	64·0	..	..	..	..	..	1925	..	1918	11	5·5
MAY	I	978·2	87·2	71·3	107·0	81·9	111·4	71·3	121	23	62	20	44	19·0
	II	974·7	107·7	71·2	..	..	..	..	..	1914	..	1930	12	9·2
JUNE	I	973·9	83·7	76·3	107·1	85·0	111·1	75·0	120	10	64	4	50	25·1
	II	970·3	103·0	76·6	..	..	..	..	..	1897	..	1888	29	18·7
JULY	I	973·0	86·2	77·9	101·2	82·7	109·3	76·0	117	5	69	6	67	28·3
	II	969·8	99·2	78·3	..	..	..	..	..	1901	..	1931	39	22·5
AUGUST	I	975·4	93·2	76·7	97·5	80·4	103·7	75·6	110	13	70	27	73	24·0
	II	972·4	96·0	77·7	..	..	..	..	..	1899	..	1889	44	21·2
SEPTEMBER	I	9[illegible]·1	91·1	73·5	93·0	7[illegible]·1	101·3	73·2	111	11	67	30	63	24·0
	II	977·2	96·3	71·9	..	..	..	..	..	1915	..	1921	31	19·3
OCTOBER	I	[illegible]	[illegible]	62·9	95·7	70·5	101·4	61·0	108	9	47	30	52	11·8
	II	[illegible]	91·[illegible]	67·5	..	..	..	..	..	1920	..	1937	20	10·7
NOVEMBER	I	[illegible]	[illegible]	51·3	[illegible]	57·8	[illegible]	19·2	99	3	33	30	49	9·3
	II	[illegible]	[illegible]	63·4	..	..	..	..	..	1905	..	1937	23	9·9
DECEMBER	I	[illegible]	[illegible]	[illegible]	75·3	[illegible]	[illegible]	41·4	99	3	32	14	50	7·4
	II	[illegible]	7[illegible]·5	[illegible]	..	..	..	..	..	1921	..	1937	31	7·9
ANNUAL	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	115·9	36·4	121	..	30	..	55	16·2
MEAN	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	..	..	..	26	12·4
[illegible]	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	..	[illegible]	..	[illegible]	[illegible]
	II		[illegible]	[illegible]	[illegible]	..	..	[illegible]	..	..	..	..	5	4

Climatological Table.

Station—BIKANER (*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hours	Rainfall: Date and year	Mean wind speed	Weather Phenomena*: No. of days with: Precipitation ·01" or more	Thunder	Hail	Dust storm	Squall	Fog.
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenths	of sky	in.		in.	in.	in.		m.p.h.						
JANUARY	I	2·8	1·3	0·27	0·8	2·38	0	1·00	9	3·0	0·8	0·2	0	0.3	0	2
	II	3·7	1·2	..	..	1894	..	..	1912	..	..	..	..	..	..	..
FEBRUARY	I	2·7	1·7	0·27	0·7	3 19	0	1·84	16	3·6	1·6	0·6	0·1	1·2	0	1·1
	II	3·3	1·8	..	..	1906	..	..	1906	..	..	..	..	..	..	..
MARCH	I	2·2	1·2	0·23	0·6	2·72	0	1·73	17	4·2	1·2	0	0	1·7	0·2	0
	II	2·5	1·3	..	..	1911	..	..	1911	..	..	..	..	..	..	..
APRIL	I	1·7	0·4	0·19	0·5	1·30	0	1·17	7	4·7	0·9	0·9	0	2	0	0
	II	2·1	1·0	..	..	1889	..	..	1914	..	..	..	..	..	..	..
MAY	I	1·1	0·1	0·59	1·3	4·72	0	1·96	26	6·3	1·0	1·2	0·2	3	0	0
	II	1·2	0·7	..	..	1917	..	..	1883	..	..	..	..	..	..	..
JUNE	I	1·6	1·2	1·21	2·2	5·81	0	4·36	19	7·5	5	3	0	5	0	0
	II	3·6	2·4	..	..	1894	..	..	1894	..	..	..	..	..	..	..
JULY	I	3·6	1·9	3·34	4·9	9·53	0	5·28	28	7·0	7	2	0	2	0·1	0
	II	4·1	2·9	..	..	1921	..	..	1920	..	..	..	..	..	..	..
AUGUST	I	3·7	1·6	3·60	4·9	13·27	0	5·59	30	6·3	5	1·1	0	1·3	0	0
	II	3·7	2·7	..	..	10 36	..	..	1909	..	..	..	..	..	..	..
SEPTEMBER	I	1·9	0·5	1·31	2·1	7 81	0	4·43	2	5·4	2	0·4	0	0·6	0	0
	II	1·9	1·3	..	..	1919	..	..	1919	..	..	..	..	..	..	..
OCTOBER	I	0·8	0·1	0·21	0·4	4·35	0	3·77	26	3·8	0·2	0·4	0	0·6	0	0
	II	0·5	0·3	..	..	1917	..	..	1917	..	..	..	..	..	..	..
NOVEMBER	I	1·2	0·2	0·05	0·1	0·66	0	0·53	15	2·5	0·1	0	0	0	0	0
	II	0·8	0·3	..	..	1893	..	..	1936	..	..	..	..	..	..	..
DECEMBER	I	2·2	0·8	0·20	0·5	1·50	0	1·18	16	2·5	0·7	0	0	0·2	0	0·8
	II	2·2	0·8	..	..	1892	..	..	1892	..	..	..	..	..	..	..
Annual Total or Mean	I	2·1	0 9	11·47	10 0	30·35	1·14	5·59	..	4·7	25	10	0·3	18	3·3	4
	II	2·4	1 4	..	..	1917	1899	..	..	..	..	..	..	..	..	..
No. of Years	I	50	5	60	60	60	60	60	..	60	10	10	10	10	10	10
	II	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

*Frequencies above 2·0 are given only in whole numbers.

Station—BIKANER (*Contd.*)

Climatological Table.

Month		Wind: No. of days with wind force: 8 or more (30)	4—7 (31)	1—3 (32)	0 (33)	Wind: Percentage No. of days of wind from: N (34)	NE (35)	E (36)	SE (37)	S (38)	SW (39)	W (40)	NW (41)	Calm (42)	Cloud: No. of days with cloud amount (all clouds): 0 (43)	T—3 (44)	4—6 (45)	7—9 (46)	10 over cast (47)
(1)																			
JANUARY	I	0	6	23	8	6	11	13	17	12	6	6	5	24	13	9	3	2	4
	II	0	0	27	4	23	21	4	1	1	3	10	22	12	12	9	5	3	2
FEBRUARY	I	0	0	24	4	5	8	15	17	14	10	8	4	19	1	7	4	3	3
	II	0	2	24	2	17	11	6	6	4	12	18	18	8	9	7	5	4	3
MARCH	I	0	1	29	1	4	7	16	19	14	13	8	6	14	14	8	4	3	2
	II	0	2	28	1	12	8	5	2	3	22	26	22	1	13	9	4	3	2
APRIL	I	0	1	27	2	5	7	11	14	14	19	15	7	9	18	9	1	1	1
	II	0	2	28	0	9	3	5	1	3	21	28	31	2	13	10	3	3	1
MAY	I	0	4	26	1	1	4	6	8	15	31	23	6	6	25	5	1	0	0
	II	0	3	28	0	4	0	0	2	3	41	31	15	1	18	10	2	1	0
JUNE	I	0	10	20	0	1	1	3	4	16	39	27	5	3	17	6	3	1	3
	II	0	6	24	0	2	9	5	3	9	43	17	8	3	12	6	4	2	0
JULY	I	0	7	23	1	1	2	5	5	19	39	22	3	5	9	9	6	4	3
	II	0	2	28	1	2	6	6	6	14	53	5	7	2	8	7	8	5	3
AUGUST	I	0	4	26	1	1	2	5	5	18	38	23	4	3	6	15	5	3	2
	II	0	1	29	1	1	5	5	6	17	46	15	3	3	5	13	6	4	3
SEPTEMBER	I	0	3	25	2	1	3	5	4	8	31	32	9	8	17	9	2	2	0
	II	0	1	23	3	5	9	2	7	5	41	14	9	9	12	12	4	2	0
OCTOBER	I	0	0	27	4	1	3	5	8	15	23	20	3	21	27	3	1	0	0
	II	0	0	30	1	10	9	1	4	3	24	22	23	4	23	7	1	0	0
NOVEMBER	I	0	0	23	7	2	4	9	17	17	11	8	3	29	22	6	1	1	0
	II	0	0	23	4	18	18	1	1	0	7	18	23	15	22	6	1	1	0
DECEMBER	I	0	0	20	11	5	11	15	19	10	5	4	5	26	14	9	4	2	1
	II	0	0	25	6	18	24	6	2	0	3	6	21	19	13	10	3	1	2
Annual Total	I	0	70	[illegible]	42	3	6	9	12	14	22	16	5	14	194	93	35	22	20
or Mean	II	0	17	287	23	10	10	4	3	5	23	17	17	6	160	104	46	31	22
No. of Years	I		5							20						5			
	II		5							6						5			

Climatological Table

Station—BIKANER—(*Concld*).

Month		Cloud (Contd.)						Visibility*				
		No. of days with Low cloud amount						No. of days with visibility				
		0	T–3	4–6	7–9	10	Fog 10	Up to 1,100 yds.	1,100 yds. to 2·5 mls.	2·5 to 6·25 mls.	6·25 to 12·5 mls.	over 12·5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	24	2	2	1	2	0	2	3	15	0.9	10
	II	24	3	2	1	1	0	0·1	0·1	0·9	19	11
FEBRUARY	I	21	1	2	2	2	0	0·6	3	13	1·5	10
	II	18	4	3	2	1	0	0·5	0·4	1·1	16	10
MARCH	I	24	3	2	1	1	0	0·1	1·4	15	3	11
	II	22	5	2	1	1	0	1·0	0·3	1·3	18	10
APRIL	I	28	2	0	0	0	0	0·1	1·7	14	3	11
	II	21	5	1	2	0	1	0·7	0·4	0·4	18	11
MAY	I	29	1	0	0	0	1	0·5	3	15	4	9
	II	24	6	1	0	0	0	0·4	0·5	1·9	18	10
JUNE	I	24	2	2	0	2	0	1·9	1·6	14	6	7
	II	16	6	4	1	3	0	0·7	1·0	3	17	7
JULY	I	18	6	4	2	1	0	0	1·1	14	7	9
	II	11	9	8	2	1	0	0·7	1·3	2	18	9
AUGUST	I	20	6	1	2	2	0	0·1	0·4	10	8	13
	II	14	7	4	4	2	0	0·1	0·5	0·7	17	13
SEPTEMBER	I	25	3	1	1	0	0	0	0·1	9	7	14
	II	16	10	2	2	0	0	0·1	0	0·5	15	14
OCTOBER	I	31	0	0	0	0	0	0·1	0·6	10	6	14
	II	25	6	0	0	0	0	0	0·1	0	16	15
NOVEMBER	I	30	0	0	0	0	0	0·1	0·6	13	2	14
	II	27	2	1	0	0	0	0	0·1	0·1	15	15
DECEMBER	I	25	3	1	1	1	0	0·6	1·1	14	1	14
	II	25	3	1	1	1	0	0	0	1·0	15	15
Annual Total or Mean	I	299	29	15	10	11	1	6	18	156	49	136
	II	243	66	29	16	10	1	5	5	13	202	140
No. of Years	I			5						8		
	II			5						8		

*Frequencies above 2·0 are given only in whole numbers.

ANNEXURE (c) IX—*Contd.*

Climatological Table

Station—JODHPUR
Lat. 26° 18′ N. Long. 73° 01′ E. Height above M.S.L. 736 ft. Based on observations from 1891 to 1940.

Month	Pressure	Air Temperature										Humidity	
				Mean (of)		Mean (of)		Extreme					
	Mean at station level	Mean dry Bulb	Mean wet Bulb	Daily max.	Daily min.	Highest in the month	Lowest in the month	Highest recorded	Date and year	Lowest recorded	Date and year	Relative Humidity	Vapour Pressure
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	mb.	°F	°F	°F	°F	°F	°F	°F		°F		%	mb.
I	[illegible]	51·9	44·4	76·3	18·6	85·3	10·3	91	31	28	31	50	6·5
II	[illegible]	55·3	55·7	..	..	..	..	..	1932	..	1905	22	5·8
I	[illegible]	55·9	47·7	80·6	52·6	91·4	43·0	101	28	31	6	50	7·4
II	[illegible]	59·5	58·2	..	..	..	..	..	1928	..	1920	21	7·0
I	[illegible]	[illegible]	54·0	99·5	61·5	101·1	51·8	107	31	41	7	33	8·2
II	[illegible]	[illegible]	62·1	..	..	..	..	..	1908	..	1908	17	7·0
I	[illegible]	77·7	61·6	[illegible]	70·8	108·1	62·5	115	23	49	7	35	10·0
II	[illegible]	[illegible]	66·3	..	..	..	..	..	1925	..	1918	11	9·8
I	[illegible]	83·9	69·4	105·1	79·4	112·3	71·5	120	25	63	6	45	17·3
II	[illegible]	104·2	72·5	..	..	..	..	..	1912	..	1909	15	12·2
I	[illegible]	[illegible]	75·2	109·6	82·3	111·5	75·2	118	11	67	9	63	21·7
II	[illegible]	101·0	77·7	..	..	..	..	..	1901	..	1914	34	[illegible]
I	[illegible]	[illegible]	76·1	[illegible]	80·2	105·5	74·7	114	5	67	19	73	27·0
II	[illegible]	[illegible]	77·3	..	..	..	..	..	1901	..	1920	46	24·7
I	[illegible]	[illegible]	[illegible]	[illegible]	77·0	100·2	74·2	107	21	69	4	83	27·5
II	[illegible]	[illegible]	77·7	..	..	..	..	..	1902	..	1927	50	[illegible]
I	[illegible]	[illegible]	[illegible]	[illegible]	74·8	102·1	70·6	109	11	64	23	70	24·1
II	[illegible]	[illegible]	[illegible]				..	..	1915	..	1903	40	[illegible]
I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	101·1	[illegible]	104	9	52	11	54	[illegible]
II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1920	..	1917	14	[illegible]
I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99	1	42	29	45	7·0
II	[illegible]	[illegible]	[illegible]	..		..	..	..	1914	..	1923	18	7·0
I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	26	51	7·1
II	[illegible]	[illegible]	[illegible]		..	..	..	..	1904	..	1908	22	7·1
I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	111·0	[illegible]	120	..	25	..	[illegible]	13·1
II	[illegible]	[illegible]	[illegible]		..	..	..	..	..	..	..	37	13·0
I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	..	[illegible]	[illegible]	[illegible]	[illegible]
II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	..	..	..	5	4

Climatological Table

Station—JODHPUR.—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hours	Rainfall: Date and year	Mean wind speed	Weather Phenomena.* No. of days with: Precipitation '01" or more	Thunder	Hail	Dust storm	Squall	Fog
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenths of sky		In.		In.	In.	In.		m.p.h.						
JANUARY	I	3·0	0·6	0·15	0·3	1·76	0	1·22	26	6·9	1·0	0·2	0	0	0	0
	II	3·7	1·1	..	..	1940	..	..	1940	..	..	..	..	..	..	..
FEBRUARY	I	2·8	1·0	0·24	0·6	1·91	0	0·89	23	6·8	2	0·9	0·2	0	0·1	0
	II	3·7	1·4	..	..	1906	..	..	1939	..	..	..	..	..	..	..
MARCH	I	2·5	0·5	0·11	0·2	1·80	0	0·81	11	6·9	0·8	0·9	0	0·3	0·1	0
	II	3·2	1·3	..	..	1926	..	..	1926	..	..	..	..	..	..	..
APRIL	I	2·1	0·5	0·13	0·5	1·18	0	1·05	27	6·8	1·2	1·7	0	1·1	0·2	0
	II	2·6	1·5	..	..	1919	..	..	1919	..	..	..	..	..	..	..
MAY	I	1·2	0·4	0·41	1·1	3·89	0	1·50	30	10·7	1·0	3	0·1	2	0·2	0
	II	1·7	1 0	..	..	1917	..	..	1916	..	..	..	..	..	..	..
JUNE	I	3·5	3·3	1·42	2·1	7·21	0	6·02	17	12·6	3	4	0	3	1·1	0
	II	3·5	2·9	..	..	1917	..	..	1917	..	..	..	..	..	..	..
JULY	I	7·1	6·0	3·97	5·5	12·22	0	5.85	7	12·1	10	5	0	0·9	0·1	0
	II	6·3	4·0	..	..	1908	..	..	1908	..	..	..	..	..	..	..
AUGUST	I	7·5	5·8	4·84	5·9	15·10	0	7·26	21	9·1	7	4	0·2	0·2	0·1	..
	II	6·2	3·9	..	..	1933	..	..	1927	..	..	..	..	..	..	..
SEPTEMBER	I	4·0	2·5	2·40	2·8	12·01	0	8·50	12	7·3	4	2	0	0	0	0
	II	4·1	3·5	..	..	1924	..	..	1924	..	..	..	..	..	..	..
OCTOBER	I	1·3	0	0·32	0·5	6·42	0	5·59	26	4·8	0.7	0·8	0	0	0·1	0
	II	1·2	0·9	..	..	1917	..	..	1917	..	..	..	..	..	..	..
NOVEMBER	I	1 3	0·4	0·11	0·2	1·63	0	1·06	22	4·5	0·4	0·2	0	0	0	0
	II	1·5	0·1	..	..	1893	..	..	1893	..	..	..	..	..	..	..
DECEMBER	I	2·1	0·6	0·11	0·3	0·90	0	0·90	18	6·1	0·3	0	0	0·1	0	0
	II	2·6	0 6	..	..	1937	..	..	1937	..	..	..	..	..	..	..
Annual Total or Mean	I	3·2	1·8	14·21	20·0	46·39	0·06	8·50	..	7 9	31	23	0·5	8	2	0
	II	3·4	1·9	..	..	1917	1899	..	..	..	..	..	..	..	..	..
No. of Years	I	40	5	50	50	50	50	50	..	41	10	10	10	10	10	10
	II	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

* Frequencies above 2·0 are given only in whole numbers.

Climatological Table

Station—JODHPUR—(*Concld*).

Month		Cloud (Contd.)						Visibility*				
		No. of days with Low cloud amount						No. of days with visibility				
		0	T—3	4—6	7—9	10	Fog 10	Upto 1,100 yds.	1,100 yds. to 2·5 mls.	2·5 to 6·25 mls.	6·25 to 12·5 mls.	Over 12·5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	27	2	1	1	0	0	0	3	17	10	0·7
	II	25	2	2	2	0	0	0	0·4	5	16	10
FEBRUARY	I	23	1	1	1	2	0	0	3	14	10	1·5
	II	20	3	3	1	1	0	0	1·7	3	12	11
MARCH	I	28	2	0	0	1	0	0·1	5	17	8	0·3
	II	23	4	1	2	1	0	0	3	8	15	5
APRIL	I	27	1	0	1	1	0	0	6	17	7	0·5
	II	18	6	3	2	1	0	0·3	3	12	12	3
MAY	I	27	2	1	1	0	0	0·1	5	21	4	0·6
	II	22	6	2	1	0	0	0	7	13	9	2
JUNE	I	24	2	2	0	2	0	0	4	16	7	3
	II	15	7	4	3	1	0	0·3	6	12	7	5
JULY	I	7	5	4	5	10	0	0	8	12	8	3
	II	10	5	9	5	2	0	0	6	9	10	6
AUGUST	I	9	5	3	4	10	0	0	5	14	10	2
	II	10	8	5	5	3	0	0·1	2	9	15	5
SEPTEMBER	I	17	5	2	4	2	0	0	1·5	11	14	4
	II	9	8	8	4	1	0	0	0·4	6	18	6
OCTOBER	I	29	2	0	0	0	0	0	2	14	13	2
	II	19	9	3	0	0	0	0	0·1	3	18	10
NOVEMBER	I	27	2	0	0	1	0	0	2	18	9	0·6
	II	27	2	1	0	0	0	0	0·1	3	18	9
DECEMBER	I	31	0	0	0	0	0	0	3	18	10	0·5
	II	3	0	0	0	0	0	0	0·3	3	18	10
Annual Total or Mean	I	276	29	14	17	29	0	0·2	47	189	110	19
	II	229	60	41	25	10	0	0·7	30	86	168	82
No. of Years	I			5						8		
	II			5						8		

* Frequencies above 2·0 are given only in whole numbers.

Average Rainfall (in Cents.)

Based on data upto the end of 1940

		Ganganagar	Gajner	Churu	Phalodi	Barmer	Alore	Pali	Nagaur	Jaisalmer	Buili
ANNUAL	..	00353	00316	01373	00888	01037	01399	01535	01857	00705	00223
JANUARY	..	26	7	34	14	10	6	11	23	16	..
FEBRUARY	..	0044	0030	0031	0019	0014	0020	0015	0029	0010	..
MARCH	..	21	18	25	14	12	9	11	22	14	9
APRIL	..	0020	0013	0023	0012	0006	0006	0007	0011	0011	0000
MAY	..	24	26	36	35	37	34	32	55	31	17
JUNE	..	0122	0109	0166	0091	0097	0123	0177	0157	0058	0090
JULY	..	269	249	428	271	352	428	413	365	206	59
AUGUST	..	0278	0299	0415	0317	0341	0476	0611	0390	0246	0106
SEPTEMBER	..	27	76	160	25	146	242	220	171	66	17
OCTOBER	..	0006	0017	0027	0007	0010	0023	0010	0010	0005	0000
NOVEMBER	..	..	3	5	2	5	12	10	5	5	..
DECEMBER	..	21	0011	0024	0010	0007	0003	0009	0020	0007	.

ANNEXURE IX (d)

Station—UDAIPUR. Lat. 24° 35′ N Long. 73° 42′ E. Height above mean sea level 1925 feet

Meterological Table compiled from 14 to 23 years' observations between 1898 and 1920.

Month	Pressure Reduced to 32° F and Lat. 45°		Air Temperature								Relative humidity	Vapour Pressure	Cloud	Rain				
	Mean		Mean 8 hrs.		Mean daily		Mean monthly		Extreme		Mean 8 hrs.			Mean monthly total	Mean No. of days	Maximum in 24 hrs.	Total in rainiest month	Total in driest month
	8 Hrs.	Daily range	Dry Bulb	Wet Bulb	Max.	Min.	Max	Min.	Max	Min.								
			°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	%	mbs.		"	"	"	"	"
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
JANUARY ..	..	..	54·8	47·2	75·8	47·5	..	..	91	31	54	8·1	1·8	0·11	0·2	1·49	1·49	0
FEBRUARY ..	..	..	59·1	49·9	79·4	50·6	..	..	94	32	49	8·5	1·8	0·14	0·4	0·53	1·19	0
MARCH ..	..	..	70·9	58·7	89·0	60·4	..	..	103	39	45	11·5	1·6	0·10	0·3	0·53	0·71	0
APRIL ..	..	..	82·9	65·9	97·7	71·2	..	..	108	48	38	14·6	1·2	0·16	0·3	1·61	2·14	0
MAY ..	..	..	88·7	72·2	102·5	78·8	..	..	112	62	43	19·2	0·5	1·14	2·2	2·00	6·28	0
JUNE ..	..	..	84·6	75·0	97·9	79·0	..	..	112	69	63	24·7	3·0	3·30	4·6	3·02	9·37	0·06
JULY ..	..	..	79·6	74·0	89·2	75·8	..	..	107	69	76	25·8	6·8	7·25	9·4	3·96	14·31	0·98
AUGUST ..	..	..	77·4	72·4	85·5	73·8	..	..	101	68	78	24·9	7·2	6·92	8·6	6·71	18·41	0·51
SEPTEMBER	..	..	78·2	71·9	87·6	71·2	..	..	101	61	73	23·7	3·6	3·86	5·2	4·17	12·18	0·05
OCTOBER	—	..	75·2	64·7	91·7	63·7	..	..	101	52	55	16·4	1·0	0·69	1·0	1·29	5·63	0
NOVEMBER	..	..	64·9	55·3	85·4	54·2	..	..	95	41	53	11·0	0·6	0·06	0·2	0·28	0·56	0
DECEMBER	..	..	56·8	49·5	78·2	48·6	..	..	89	34	57	9·0	1·3	0·08	0·3	0·35	0·71	0
M. ..	..	..	72·8	63·1	88·3	64·6	..	..	..	..	57	16·5	2·5	..	..	..	..	..
T. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	23·78	32·7	..	..	..
E. ..	..	..	..	..	..	..	..	..	112	31	..	..	..	..	..	6·71	48·14	9·92
N. ..	..	..	14	14	14	14	..	..	14	14	14	14	14	23	23	23	23	23

M=Means. T=Totals. E=Extreme value. N=Number of years of observations.

Climatological Table.

Station—ABU—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hours	Rainfall: Date and year	Mean wind speed	Weather Phenomena*: No. of days with: Precipitation ·01" or more	Thunder	Hail	Dust storm	Squall	Fog
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenths	of sky	in.		in.	in.	in.		m.p.h.						
JANUARY	I	2·1	0·4	0·26	0·6	1·95	0	1·49	30	3·5	0·5	0	0	0	0	0·1
	II	2·6	0·4	..	..	1940	..	..	1888	..	..	..	..	..	..	..
FEBRUARY	I	2·1	0·7	0·23	0·6	2·91	0	1·60	22	4·4	1·9	0	0	0	0	0·6
	II	2·7	0·8	..	..	1889	..	..	1906	..	..	..	..	..	..	..
MARCH	I	1·9	0·2	0·17	0·5	2·06	0	1·07	10	5·1	0·8	0·3	0	0	0	0·2
	II	1·9	0·2	..	..	1911	..	.	1927	..	..	..	..	..	..	..
APRIL	I	1·5	0·1	0·11	0·3	1·36	0	0·89	9	5·9	0·7	0·6	0·1	0	0	0·2
	II	1·6	0	..	..	1909	..	..	1900	..	..	..	..	..	..	..
MAY	I	1·0	0·3	0·93	1·3	8·58	0	3·65	29	7·3	1·0	0·8	0	0	0	0·2
	II	0·6	0·2	..	..	1917	..	..	1917	..	..	..	..	..	..	..
JUNE	I	5·6	4·2	4·65	5·8	24·15	0	6·78	29	8·0	7	1·9	0	0.1	0	4
	II	5·0	4·0	..	..	1893	..	..	1889	..	..	..	..	..	..	..
JULY	I	8·9	6·8	21·99	17·8	69·44	0·92	15·53	27	8·0	23	0·9	0·1	0	0	18
	II	8·5	6·4	..	..	1908	1911	..	1929	..	..	..	..	..	..	..
AUGUST	I	9.1	7·2	22·75	17·4	69·47	0·47	16 53	20	7·8	15	1·1	0	0	0	18
	II	8.1	6·5	..	..	1934	1899	..	1907	..	..	..	..	..	..	..
SEPTEMBER	I	5·5	2·3	9·37	7·6	50·40	0	15·90	6	5·4	10	0·7	0·1	0	0	7
	II	5·2	3·7	..	..	1893	..	..	1892	..	..	..	..	..	..	..
OCTOBER	I	1·4	0·1	0·76	0·9	15·33	0	5·83	26	3·4	0·3	0·4	0	0	0	0
	II	1·2	0·3	..	..	1917	..	..	1917	..	..	..	..	..	..	..
NOVEMBER	I	1·2	0·6	0·22	0·4	3·30	0	1·72	21	2·9	0·9	0·1	0	0	0	0
	II	1·5	0·6	..	..	1893	..	..	1896	..	..	..	..	..	..	.
DECEMBER	I	1·7	0·3	0·12	0·3	1·31	0	1·00	8	2·9	0·7	0·1	0	0	0	0
	II	2·2	0·1	..	..	1927	..	..	1898	..	..	..	..	..	..	..
Annual Total or Mean	I	3·5	1·9	61·56	53·5	144·46	11·42	16·53	..	5·4	62	7	0·3	0.1	0	48
	II	3·4	2·0	..	..	1917	1899	..	..	..	..	..	..	..	..	..
No. of Years	I	50	5	60	60	60	60	60	..	60	10	10	10	10	10	10
	II	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

* Frequencies above 2·0 are given only in whole numbers.

Climatological Table.

Station—ABU—(*Contd.*)

Month		Wind: No. of days with wind force: 8 or more	4–7	1–3	0	Wind: Percentage No. of days of Wind from: N	NE	E	SE	S	SW	W	NW	Calm	Cloud: No. of days with cloud amount (All clouds): 0	T–3	4–6	7–9	10 over cast
(1)		(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
JANUARY	I	0	0	17	14	10	16	1	3	4	13	8	7	37	17	5	1	3	2
	II	0	0	25	6	23	12	1	1	3	19	8	14	18	17	3	5	4	2
FEBRUARY	I	0	0	18	10	11	20	3	4	1	16	9	13	23	16	5	2	2	3
	II	0	0	23	5	13	7	1	3	1	21	18	15	18	14	5	5	2	2
MARCH	I	0	0	26	5	12	20	2	4	2	22	11	16	11	19	5	3	2	2
	II	0	0	23	3	12	6	0	0	3	32	16	20	11	18	6	4	1	2
APRIL	I	0	0	24	6	8	14	2	5	1	28	17	21	3	21	5	2	1	1
	II	0	0	27	3	10	3	1	2	5	31	21	17	10	19	5	3	2	1
MAY	I	0	0	29	2	7	6	0	4	6	40	19	17	2	25	3	1	1	1
	II	0	1	29	1	1	0	1	1	17	40	31	6	3	21	5	2	0	0
JUNE	I	0	1	27	2	3	1	1	7	8	60	9	4	3	5	3	2	4	10
	II	0	2	25	3	2	4	1	3	25	37	15	5	9	1	3	6	4	8
JULY	I	0	2	25	4	4	2	1	4	7	63	21	4	4	0	1	1	2	27
	II	0	2	21	6	1	1	0	3	19	41	10	4	19	1	2	3	1	21
AUGUST	I	0	1	23	2	2	3	1	2	5	66	12	4	4	1	0	3	4	23
	II	0	2	27	2	1	3	1	5	23	48	14	2	5	0	2	7	5	17
SEPTEMBER	I	0	2	22	6	3	3	1	4	6	16	11	8	8	7	6	5	3	9
	II	0	1	23	6	6	1	1	2	17	29	17	5	18	5	7	6	5	7
OCTOBER	I	0	0	23	8	10	18	4	7	6	20	8	10	18	21	6	2	0	0
	II	0	0	27	4	11	11	1	1	3	17	22	13	14	15	12	3	1	0
NOVEMBER	I	0	0	15	15	8	22	4	1	2	7	4	6	45	19	8	1	1	3
	II	0	0	15	5	24	19	6	3	1	12	9	17	14	19	8	2	1	3
DECEMBER	I	0	0	13	13	19	14	2	5	7	10	4	5	15	10	4	3	2	2
	II	0	0	13	9	17	12	2	1	1	12	6	14	23	17	6	4	3	2
Annual Total	I	0	5	17	5	5	12	2	4	4	24	10	9	17	170	54	29	25	54
	II	0	5	14	51	12	7	1	2	10	27	16	11	14	151	57	49	12	76
Mean of Years	I			3						5							3		
	II			3						5							3		

Climatological Table.

Station—ABU—(*Concld.*)

Month		Cloud—(Contd.) No. of days with Low cloud amount						Visibility * No. of days with visibility				
		0	T—3	4—6	7—9	10	Fog 10	Up to 1,100 yds.	1,100 yds. to 2.5 Mls.	2.5 to 6.25 mls.	6.25 to 12.5 mls.	Over 12.5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	30	0	0	0	1	0	0	0	0	31	0
	II	29	0	0	0	1	1	0	0	0	31	0
FEBRUARY	I	26	0	0	0	2	0	0.4	0.1	0	28	0
	II	25	0	1	0	2	0	0.1	0	0.1	28	0
MARCH	I	30	0	0	0	1	0	0.3	0	0	31	0
	II	30	0	1	0	0	0	0	0	0	31	0
APRIL	I	30	0	0	0	0	0	0	0.3	0	30	0
	II	30	0	0	0	0	0	0	0.3	0.1	30	0
MAY	I	30	0	0	0	1	0	0.1	0.7	0.1	30	0.3
	II	31	0	0	0	0	0	0	0.3	0.3	30	0.1
JUNE	I	10	2	1	3	11	3	4	2	0.7	23	0.6
	II	16	2	3	2	7	0	0.5	0.6	0.3	29	0
JULY	I	4	1	0	4	9	13	14	2	0.6	14	0
	II	7	1	2	2	14	5	5	1.6	0.7	24	0
AUGUST	I	3	0	2	2	10	14	16	1.4	1.1	13	0
	II	6	2	5	3	13	2	4	1.3	3	22	0.4
SEPTEMBER	I	17	2	2	1	5	3	5	0.4	0.4	22	2
	II	12	3	4	3	5	2	1.4	0.9	0.7	24	3
OCTOBER	I	31	0	0	0	0	0	0	0	0	27	4
	II	30	1	0	0	0	0	0	0	0.3	27	4
NOVEMBER	I	28	0	0	2	0	0	0.1	0	0	26	4
	II	28	1	0	0	1	0	0	0.1	0.1	26	4
DECEMBER	I	30	1	0	0	0	0	0	0	0	27	4
	II	31	0	0	0	0	0	0	0	0	28	3
Annual Total or Mean	I	269	6	5	12	10	43	40	7	3	302	15
	II	275	11	16	10	33	10	11	5	6	330	15
No. of Years	I			5						8		
	II			5						8		

* Frequencies above 2·0 are .ive

Climatoloigical Table.

Station—KOTAH—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hrs.	Rainfall: Date and year	Mean wind speed	Weather Phenomena*: No. of days with: Precipitation ·01" or more	Thunder	Hail	Dust storm	Squall	Fog
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenth of sky		in.		in.	in.	in		m. p. h.						
JANUARY	I	2·2	2·1	0·24	0·6	1·41	0	1·41	24	1·3	2	1·8	0·2	0	0	1·2
	II	3·6	1·9	..	..	1915	..	..	1915	..	..	..	..	..	..	..
FEBRUARY	I	2·2	2·2	0·21	0.5	3·10	0	2·00	3	1·7	1·6	0·4	0	0	0	0·1
	II	3·4	2·0	..	..	1915	..	..	1915	..	..	..	..	..	..	..
MARCH	I	1·9	1·4	0·17	0·5	1·14	0	0·61	12	2·1	1·0	1·1	0·2	0.1	0	0·1
	II	2·7	1.8	..	..	1915	..	..	1940	..	..	..	..	..	..	..
APRIL	I	1·8	1·0	0·21	0·5	2·18	0	1·02	12	2·7	0·9	1·3	0	1·2	0	0
	II	2·8	1·6	..	..	1909	..	..	1933	..	..	..	..	..	..	..
MAY	I	1·1	0·7	0·47	1·0	3·03	0	2·10	28	4·1	1·2	3	0·1	1·8	0	0
	II	2·8	2·0	..	..	1917	..	..	1917	..	..	..	..	..	..	..
JUNE	I	3·2	3·9	2·64	4·1	8·85	0	5·20	17	5·0	8	7	0	1·3	0	0
	II	6·0.	5·0	..	..	1917	..	..	1917	..	..	..	..	..	..	..
JULY	I	6·6	7·2	10·14	11·1	24·11	2·11	6·97	3	4·0	17	8	0	0·3	0	0
	II	8·1	6·7	..	..	1924	1913	..	1906	..	..	..	..	..	..	..
AUGUST	I	6·5	6·1	9·66	10·1	27·72	0·81	5·85	11	3·4	13	5	0	0·1	0	0
	II	8·0	6·3	..	..	1931	1925	..	1908	..	..	..	..	..	..	..
SEPTEMBER	I	3·8	2·8	4·71	5·7	18·85	0·14	7·30	8	2·6	8	4	0	0·2	0	0
	II	5·2	4·0	..	..	1926	1920	..	1926	..	..	..	..	..	..	..
OCTOBER	I	1·6	0·7	0·65	1·0	6·13	0	3·86	30	1·5	0·4	1·0	0	0	0	0
	II	2·1	1·0	..	..	1917	..	..	1930	..	..	..	..	..	..	..
NOVEMBER	I	1·3	1·0	0·23	0·6	3·00	0	2·13	4	1·0	0·8	0·1	0	0	0	0·1
	II	2·1	1·2	..	..	1927	..	..	1927	..	..	..	..	..	..	..
DECEMBER	I	1·8	1·3	0·21	0·5	2·04	0	1·18	19	1·0	0·4	0·2	0	0	0	0·1
	II	3·1	1·3	..	..	1927	..	..	1927	..	..	..	..	..	..	..
Annual Total or Mean	I	2·8	2·5	29·54	36·5	62·72	6·76	7·30	..	2·5	51	33	0·5	5	0	1·6
	II	4·2	2·9	..	..	1917	1905	..	..	..	..	..	..	..	..	..
No. of Years		40	5	40	40	40	40	40	..	40	10	10	10	10	10	10
		5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

* Frequencies above 2·0 are given only in whole numbers.

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Climatological Table

Station—KOTAH—(*Concld.*)

Month		Clouds—(Contd.) No. of days with Low cloud amount						Visibility* No. of days with visibility				
		0	T—3	4—6	7—9	10	Fog 10	Up to 1,100 yds.	1,100 yds. to 2·5 mls.	2·5 to 6·25 mls.	6·25 to 12·5 mls.	Over 12·5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	22	0	5	1	3	0	2	1·9	7	18	1·7
	II	21	2	4	2	2	0	0·1	1·9	5	19	5
FEBRUARY	I	20	0	3	2	3	0	1·3	3	6	15	3
	II	18	2	4	3	1	0	0·1	1·5	3	15	9
MARCH	I	25	0	4	1	0	1	0·7	2	7	18	3
	I	22	2	3	2	2	0	0·1	1.5	8	15	6
APRIL	I	25	1	3	0	1	0	0·6	1·6	9	17	1·4
	II	21	4	3	2	0	0	0·1	3	9	14	4
MAY	I	27	1	1	1	1	0	0·6	3	11	16	0·6
	II	21	3	3	2	2	0	0·1	5	9	15	1·8
JUNE	I	14	0	9	2	5	0	0	1·6	9	17	2
	II	6	7	5	5	7	0	0	6	7	11	6
JULY	I	5	0	5	5	16	0	0·4	1·9	7	17	5
	II	4	5	4	4	14	0	0·1	5	6	13	7
AUGUST	I	7	2	4	3	15	0	0·3	1·5	5	17	7
	II	3	6	4	6	12	0	0·1	2	7	13	9
SEPTEMBER	I	17	2	5	2	4	0	0·1	0·4	1·7	18	10
	II	5	12	7	3	3	0	0	3	4	14	9
OCTOBER	I	26	1	2	1	1	0	0·1	0·5	2	17	11
	II	22	6	3	0	0	0	0	0	1·6	14	15
NOVEMBER	I	26	0	1	1	2	0	0·6	0·6	5	16	8
	II	24	2	2	1	1	0		0·4	3	19	8
DECEMBER	I	25	1	3	1	1	0	3	4	8	13	3
	II	23	3	3	1	1	0	0·1	3	7	18	3
Annual Total or Mean	I	230	8	45	20	52	1	10	22	78	199	56
	I	190	54	45	31	45	0	0·8	32	70	180	83
No. of Years	I			5						8		
	II			5						8		

* Frequencies above 2·0 are given only in whole numbers.

Climatological Table.

Station - BRIJNAGAR.
Lat. 24° 32′ N. Long. 76° 10′ E. Height above M.S.L. 1,053 Ft. Based on observations from 1931 to 1940.

Month		Pressure	Air Temperature										Humidity	
					Mean (of)		Mean (of)		Extreme					
		Mean Sea Level	Mean Dry Bulb	Mean Wet Bulb	Daily Max.	Daily Min.	Highest in the month	Lowest in the month	Highest recorded	Date and year	Lowest recorded	Date and year	Relative Humidity	Vapour Pressure.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		mb.	°F	°F	°F	°F	°F	°F	°F	°F	°F		%	mb.
JANUARY	I	[illegible]	63·6	47·6	77·9	47·9	87·3	37·8	91	31	31	16	61	8·5
	II	977·0	74·7	59·5	..	..	..	..	..	1932	..	1935	38	10·4
FEBRUARY	I	977·3	[illegible]	51·0	82·3	52·8	92·4	42·2	97	23	35	2	55	9·3
	II	[illegible]	[illegible]	61·7	..	..	..	..	..	1934	..	1934	30	9·4
MARCH	I	975·9	69·0	51·0	91·4	60·7	100·5	50·9	105	27	40	5	39	9·0
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1931	..	1935	19	8·8
APRIL	I	[illegible]	[illegible]	62·7	103·5	70·1	107·8	61·6	111	18	58	2	32	11·0
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1937	.	1940	14	9·4
MAY	I	[illegible]	[illegible]	[illegible]	107·0	80·1	113·0	71·1	116	25	67	4	46	20·5
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1932	..	1937	19	14·8
JUNE	I	[illegible]	[illegible]	77·2	101·6	81·2	110·1	73·9	113	14	71	4	60	27·7
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1934	..	1934	47	24·5
JULY	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100·5	73·3	103	1	71	25	84	29·1
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1931	..	1939	69	29·0
AUGUST	I	[illegible]	[illegible]	[illegible]	97·1	75·0	94·5	71·9	99	31	71	4 days	87	29·3
	II	[illegible]	[illegible]	[illegible]	..	.	..	..	..	1932	..	1934	69	27·7
SEPTEMBER	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	95·2	69·7	101	4	64	23	84	27·1
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1932	..	19[illegible]	70	24·9
OCTOBER	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	87·1	[illegible]	99	1	51	27	64	17·1
	II	[illegible]	[illegible]	[illegible]	.	.	..	..	..	19[illegible]	..	1934	24	13·[illegible]
NOVEMBER	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	81·8	45·9	94	3	42	30	62	11·4
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	1[illegible]	..	19[illegible]	22	10·4
DECEMBER	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	38	24	66	9·6
	II	[illegible]	[illegible]	[illegible]	..	.	..	..	.	19[illegible]	..	19[illegible]	31	9·5
[illegible]	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	120	..	31	..	62	17·4
	II	[illegible]	[illegible]	[illegible]	..	.	..	.	..	.	..	..	3	11·0
[illegible]	I	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	10	..	10	10	10	10
	II	[illegible]	[illegible]	[illegible]	..	..	..	..	..	..	..	..	6	6

Climatological Table

Station—BRIJNAGAR—(*Contd.*)

Month		Cloud Amount: All clouds	Cloud Amount: Low clouds	Rainfall: Mean monthly total	Rainfall: Mean No. of rainy days	Rainfall: Total in wettest month with year	Rainfall: Total in driest month with year	Rainfall: Heaviest fall in 24 hrs.	Rainfall: Date and year	Mean wind speed	Weather Phenomena* No. of days with: Precipitation ·01″ or more	Thunder	Hail	Dust storm	Squall	Fog
(1)		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
		Tenths of sky		in.		in.	in.	in.		m. p. h.						
JANUARY	I	2·1	0·8	0·28	0·7	1·60	0	1·03	19	2·0	3	1·8	0·1	0	0	1·1
	II	2·7	0·9	..	..	1940	..	..	1940	..	..	..	.	..	..	..
EBRUARY	I	1·9	0·9	0·08	0·4	0·20	0	0·15	15	2·6	1·9	1·2	0	0	0	0·1
	II	2·3	1·1	..	..	1937	..	..	1935	..	..	..	..	..	..	..
MARCH	I	1·5	0·3	0·14	0·6	0·50	0	0·50	10	3·0	0·9	1·4	0	0·2	0	0·1
	II	2·2	1·1	..	..	1940	..	..	1940	..	..	..	..	..	..	..
APRIL	I	1·4	0·5	0·27	0·5	2·18	0	1·37	13	3·5	0·8	3	0	0·3	0	0
	II	2·4	1·2	..	..	1933	..	..	1933	..	..	..	..	..	..	..
MAY	I	1·0	0·6	0·35	0·9	1·20	0	1·07	15	5·2	1·8	4	0·1	1·9	0	0
	II	2·5	1·8	..	..	1940	..	..	1936	..	..	..	..	..	..	..
JUNE	I	3·9	3·2	4·44	7·1	12·01	0·93	3·79	23	6·3	8	9	0	0·2	0	0
	II	5·5	4·2	..	..	1933	1931	..	1933	..	..	..	..	..	..	..
JULY	I	7·9	6·3	11·68	13·5	22·69	4·86	4·90	14	4·0	19	9	0	0	0	0
	II	7·7	5·6	..	..	1937	1934	..	1940	..	..	..	..	..	..	..
AUGUST	I	7·8	5·9	11·51	12·8	22·35	3·07	5·95	25	3·9	15	6	0	0	0	0
	II	7·5	5·4	..	..	1937	1932	..	1940	..	..	..	..	..	..	..
SEPTEMBER	I	4·7	2·8	6·23	6·9	14·57	0·56	4·03	17	3·1	9	5	0·2	0	0	0
	II	4·1	3·2	..	..	1935	1938	..	1935	..	..	..	..	..	..	..
OCTOBER	I	1·7	0·5	0·55	1·5	2·15	0	1·25	13	1·6	1·3	0·9	0	0	0	0·1
	II	1·9	1·0	..	..	1931	..	..	1938	..	..	..	..	..	..	..
NOVEMBER	I	1·3	0·6	0·73	1·1	4·82	0	2·60	21	1·2	1·1	0·1	0	0	0	0·2
	II	1·7	0·8	..	..	1933	..	..	1933	..	..	..	..	..	..	..
DECEMBER	I	1·9	0·7	0·19	0·3	0·86	8	0·83	31	1·5	0·8	0·6	0·2	0	0	0·2
	II	2·1	0·7	..	..	1937	..	..	1937	..	..	..	..	..	..	..
Annual Total or Mean	I	3·1	1·9	36·45	46·3	55·42	21·60	5·95	..	3·2	63	42	0·6	3	0	1·8
	II	3·5	2·3	..	..	1932	1932	..	..	..	..	..	..	..	..	..
No. of Years	I	10	5	10	10	10	10	10	..	10	10	10	10	10	10	10
	II	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..

*Frequencies above 2·0 are given only in whole numbers.

Climatological Table

Station—BRIJNAGAR—(*Contd.*)

Month		Wind: No. of days with wind force: 8 or more	4—7	1—3	0	Percentage No. of days of Wind from: N	NE	E	SE	S	SW	W	NW	Calm	Cloud: No. of days with cloud amount: 0	T-3	4-6	7-9	10 over cast
(1)		(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
JANUARY	I	0	0	19	12	19	9	3	5	2	0	3	17	40	13	9	3	3	3
	II	0	0	23	3	21	33	7	1	1	4	6	13	10	10	10	6	4	1
FEBRUARY	I	0	0	18	10	16	6	10	9	4	5	8	9	37	14	9	2	1	2
	II	0	1	25	2	23	17	6	4	1	10	16	14	10	10	10	4	3	1
MARCH	I	0	0	21	10	15	12	9	7	5	5	9	10	30	18	7	4	2	0
	II	0	1	28	2	16	12	1	3	0	13	21	26	7	13	9	5	3	1
APRIL	I	0	0	25	5	7	9	7	12	9	11	14	15	17	17	9	3	1	0
	II	0	1	28	1	8	8	3	3	2	10	35	29	2	10	12	5	3	0
MAY	I	0	3	27	1	5	1	1	1	2	16	37	12	5	22	6	0	2	1
	II	0	3	28	0	5	1	1	1	1	17	50	23	1	11	11	5	3	1
JUNE	I	0	4	21	0	2	3	0	1	1	31	53	8	1	7	7	4	7	5
	II	0	2	27	1	5	3	5	5	5	27	30	15	3	3	9	5	10	4
JULY	I	0	1	29	1	1	2	1	1	1	34	51	3	3	0	2	5	10	14
	II	0	1	28	2	3	1	2	2	3	24	39	12	9	0	2	6	13	10
AUGUST	I	0	1	27	1	1	5	3	2	1	23	56	7	4	0	6	3	9	13
	II	0	0	0	1	3	1	3	1	1	32	42	10	5	0	4	5	11	9
SEPTEMBER	I	0	0	25	1	4	5	5	5	3	19	36	12	12	5	13	3	5	4
	II	0	0	25	5	2	2	5	3	2	20	22	19	16	2	14	6	6	2
OCTOBER	I	0	0	21	10	6	5	13	14	8	6	4	10	32	19	9	1	1	1
	II	0	0	2	1	14	20	12	5	5	5	5	8	23	11	14	4	2	0
NOVEMBER	I	0	0	15	15	10	11		5	8	4	4	7	50	12	9	1	2	1
	II	0	0	13	4	12	15	4	4	2	1	2	6	50	15	10	2	3	0
DECEMBER	I	0	3	15	13	14	8	4	5	4	3	4	11	32	14	11	1	4	1
	II	0	0	27	4	4	14	4	2	2	1	2	6	12	12	11	5	1	0
Annual Total	I	0	9	272	93	8	9	5	5	4	11	4	19	24	146	97	10	17	15
	II	0	9	312	4	12	14	5	4	2	14	22	15	11	97	115	5	67	21
No. of Years	I			5						5							5		
	II			5						5							5		

Climatological Table

Station -BRIJNAGAR—(*Concld.*)

Month		Cloud—(Contd.) No. of days with Low cloud amount						Visibility* No. of days with visibility				
		0	T-3	4-6	7-9	10	Fog 10	Up to 1,100 yds.	1,100 yds. to 2.5 mls.	2.5 to 6.25 mls.	6.25 to 12.5 mls.	Over 12.5 mls.
(1)		(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
JANUARY	I	24	2	1	2	2	0	0·4	0·5	20	10	0
	II	23	5	1	2	0	0	0	0·1	1·6	18	11
FEBRUARY	I	23	3	0	1	1	0	0·1	0·7	18	9	0·1
	II	20	5	2	0	1	0	0	0	0·4	18	10
MARCH	I	28	2	1	0	0	0	0	0·1	20	10	1·0
	II	23	4	3	1	0	0	0	0·1	0·6	20	10
APRIL	I	27	2	1	0	0	0	0	1·0	19	10	0·1
	II	23	4	2	1	0	0	0	0·1	0·9	18	11
MAY	I	28	0	1	1	1	0	0	5	17	9	0·3
	II	20	4	4	2	1	0	0	0	0·5	5	25
JUNE	I	16	3	3	5	3	0	0·3	3	20	7	0
	II	9	7	5	7	2	0	0	0·3	5	18	7
JULY	I	4	5	5	5	12	0	0·4	6	17	8	0
	II	3	6	9	6	7	0	0·5	2	7	18	4
AUGUST	I	6	4	4	5	12	0	0·5	7	18	6	0
	II	2	8	8	8	5	0	0	3	11	1	1·5
SEPTEMBER	I	17	3	3	4	3	0	0·5	3	19	7	0·3
	II	6	16	4	2	2	0	0·3	1·4	7	18	3
OCTOBER	I	30	1	0	0	0	0	0	3	23	5	0
	II	22	7	2	0	0	0	0	0	5	23	3
NOVEMBER	I	26	1	1	1	1	0	0·4	3	23	3	0
	II	21	4	1	1	0	0	0	1·5	2	23	3
DECEMBER	I	26	1	2	1	1	0	0·3	3	20	8	0·1
	II	24	3	3	1	0	0	0	0	3	23	5
Annual Total or Mean	I	255	27	22	25	36	0	3	35	234	92	1·9
	II	199	73	44	31	18	0	0·3	9	44	217	83
No. of Years	I			5						8		
	II			5						8		

*Frequencies above 2·0 are given only in whole numbers.

APPENDIX II

SOCIAL AND CULTURAL ASPECTS

Instructions to Enumerators.

8 In the list of Census questionnaire about literacy, the instructions to the enumerators were to write '0' in case of illiterates, a symbol "लि.प." to indicate reading and writing in case of those who could both read and write a simple letter written or printed in any language. In case of those who only knew how to read but could not write he was to write the symbol "प." indicating reading. In case of those having higher education he was asked to write the examination passed or degree or diploma obtained, instead of the symbol "लि.प."

9. The instructions were clear enough and were properly understood by every one concerned. There is no reason to suspect the accuracy of the figures except those relating to the "Higher Examination passed", which have effect on the figures published in Main Table D-VII. In these figures is found reflected some inadvertance on the part of respondents to supply the details required, with the necessary minuteness.

Statistical data

10. The information collected by means of above questions was tabulated in the following tables. The Main Tables are published in Report Part II-A and the Subsidiary Tables in Part I-B.

(a) Main Table C-IV (Literacy by age groups) which is prepared on sample basis and shows literacy figures by age, for the State as a whole as well as the Natural Divisions and the districts with rural and urban break-up and sex details.

(b) Main Table D-VII (Literacy by Educational standard) which shows the literacy figures of the population, for the State as a whole as well as the Natural Divisions and the districts with rural and urban break-up and sex details, separately for Agricultural and Non-Agricultural classes.

(c) Subsidiary Table 7·1 prepared from Main Table C-IV (Sample) which shows the progress of literacy among males and females, per thousand of the population, who were aged 5–9, 5–14, 5 and upwards and 15 and upwards during the period 1941-51.

(d) Subsidiary Table 7·2 which shows the distribution of 10,000 literates by educational standard in the States of Rajasthan and Ajmer.

(e) Subsidiary Table 7·3 which shows the number of persons engaged in Educational Services and Research and their distribution per lac of population.

(f) Subsidiary Table 7·4 which shows the literacy figures, per thousand of the population for the State as a whole as well as the Natural Divisions and the districts with rural and urban break-up and sex details.

(g) Subsidiary Table 7·5 which shows literacy and educational standards per million of the population as distributed in the two main livelihood classes Agricultural and Non-Agricultural in Rajasthan and Ajmer States.

(h) Subsidiary Table 7·6 which has been prepared from information supplied by the Director of Education, Rajasthan Government and shows the type and number of educational institutions for boys and girls with the number of scholars and teachers in each institution in Rajasthan.

(i) The Primary Census Abstracts given in the District Census Handbooks of the Districts concerned give actual figures of literates sexwise in each village and town-ward. The figures in Primary Census Abstracts have been taken from the National Register of Citizens, which contains an exact copy of the entries in the slips, while those in the above mentioned tables have been taken from the entries in Census slips. A slight difference, if any, may be due to the transcribing errors.

Extent of Literacy in Rajasthan and Ajmer

11. A look at the Subsidiary Table 7 4 given in part I-B of the Report shows that only 8·4 per cent of the population of Rajasthan State as a whole are literates *i. e.*, they can read and write in some language or other. The remaining 91·6 per cent are either totally illiterate or partially literate *i. e.*, who can neither read nor write in any language or can only read

District of Jalore, where the percentage of literacy is 4, are mostly herdsmen, breeders and keepers of cattle and buffaloes, who as such are naturally averse to literacy. These low figures have however been compensated for by the figures for Bikaner and Jodhpur Districts of this Natural Division.

14. It is not surprising to find that the highest percentage figures of literacy in the State are in the East Rajasthan Plain Division (i.e. 9) which is in several respects the most advanced area.

Literacy in Districts.

15. Discussing the percentage of literacy figures at district level it will be seen, as stated above, that Jalore and Jaisalmer are the most backward from the point of view of literacy, the percentage being 4 and 4·3 respectively. The highest percentage figure of literacy (12·4) is found in the District of Jodhpur, next to it in Jaipur and Kotah where the percentage is 11·2 in each.

Rural-Urban Literacy.

16. The rural areas lag far behind urban areas as may be seen from the Table No. A-3 below:—

TABLE No. A-3.

Percentage of literacy in Rural and Urban areas.

State & Natural Division	Percentage of literates					
	Rural			Urban		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
Rajasthan State ..	5	8·8	0·8	24·7	37·3	11·1
East Rajasthan Plain Division	5·7	10·1	0·9	22·8	34·7	10·0
Rajasthan Dry Area Division.	4·2	7·2	0·8	24·0	36·8	10·3
Rajasthan Hills Division ..	4·1	7·5	0·7	31·7	46·6	16·0
Rajasthan Plateau Division .	5·2	9·3	0·9	29·6	43·4	14·8
Ajmer State	7·9	13·8	1·7	36·7	50	21·8

It is interesting to note the wide gulf existing between the rural and urban literacy. The ratio of rural to urban literacy is that of 1:5 in Rajasthan as a whole. The width of the gulf varies from Division to Division. It is the widest in the Rajasthan Hills Division where the proportion of rural to urban literacy is 1:8. It is the narrowest in the East Rajasthan Plain Division where the ratio is 1:4. What is more curious is that East Rajasthan Plain Division which has the highest percentage of General as well as Rural literacy, is the lowest in respect of Urban literacy in comparison with other divisions and just the opposite is the case of Rajasthan Hills Division which is lowest in respect of Rural and General literacy, but is the highest in respect of Urban literacy. The figures indicate the necessity of extension of educational institutions in the interior of the country in Rajasthan Hills Division, much more than in other parts of the State.

19. Kingsley Davis has remarked "Literacy in India tends to increase according to the size of the city. The increase in literacy according to the size of city is much sharper for females than males." *But here in these States the position is different as shown above. The increase of female literacy by size of city is also not so sharp here as explained by Kingsley Davis in the passage quoted above. Here in the largest city, the male literacy is a little less than three times as great as female literacy while in the smaller city for example Kotah, it is only nearly double.

20. An additional question is this: Is literacy moving ahead faster in the cities of this area than in the country? The answer is, yes. The evidence consists in returns for literacy by age, as presented in Table No. A 6 below which shows the percentage of literates to the total population in each of the age groups mentioned below and the ratio of percentage literacy in age group 25 and over to that in each of the earlier age groups.

TABLE A-6

Percentage of literates for three age groups in cities and outside the cities, in Rajasthan and Ajmer, during 1951 Census.

	Rajasthan						Ajmer					
	Percentage of literates in Cities			Percentage of literates in Rest of Rajasthan			Percentage of literates in Ajmer City			Percentage of literates in Rest of Ajmer State		
	5-14	15-24	25 & over	5-14	15-24	25 & over	5-14	15-24	25 & over	5-14	15-24	25 & over
Persons ..	34·4	40·1	23·1	5·3	9·6	5·0	37·7	54·4	31·0	12·3	76·4	9·5
Ratio ..	1:1·5	1:1·7	..	1:1·1	1:1·9		1:1·2	1:1·8		1:1·3	1:8·0	..
Males ..	45·6	56·8	35·3	8·2	12·9	8·4	43·9	70·9	44·3	18·8	27·8	16·6
Ratio ..	1:1·3	1:1·7	..	1:1	1:1·6	..	1:1	1:1·6	..	1:1·1	1:1·7	..
Females ..	21·7	22·1	9·0	2·1	2·8	1·2	30·1	38·2	15·7	4·8	5·1	7·9
Ratio ..	1:2·4	1:2·5	..	1:1·7	1:2·3	..	1:1·9	1:2·4	..	1:0·61	1:0·65	..

21. Since the age group 5-14 and 15-24 will constitute the most active part of the next adult generation, its degree of literacy holds an important key to the future. In the Rajasthan's population the ratio of this age group to the 25 plus age group, with respect to literacy, is generally higher in the cities than in the country. This means that in the future the cities will improve their literacy even faster than the rural sections, and that consequently the gulf between city and country will increase rather than diminish.

22. The Table A-7. below shows the progress of literacy from 1921 onwards.

Progress of literacy.

TABLE No. A-7.

Progress of Literacy.

States	Percentage of literates to total											
	Persons in				Males in				Females in			
	1921	1931	1941	1951	1921	1931	1941	1951	1921	1931	1941	1951
1	2	3	4	5	6	7	8	9	10	11	12	13
Rajasthan ..	3·9	4·3	5·2	8·4	6·8	7·6	8·9	13·7	0·5	0·6	1·0	2·6
Ajmer	11·3	12·5	12·5	20·3	18·5	20·3	19·8	29·6	2·6	3·5	4·4	10·2

* Population of India & Pakistan by Kingsley Davis page 143.

33. In the age group 5–14 the increase in literacy is from 10 per cent to 30 per cent in Rajasthan as a whole. Amongst the Divisions it has more than quadrupled itself, as would naturally be expected, in the East Rajasthan Plain Division, the increase has been from 8·4 per cent to 35·4 per cent and in the other two Divisions, the Dry Area and Hills, it has nearly trebled, the figures being from 10·7 to 28·3 and 7·2 to 18·7 per cent respectively, whereas the increase in Plateau Division is from 17·3 to 31·9 per cent.

34. In the age group 5 and upwards in Rajasthan as a whole it is noticeable that the rise in literacy has been quite significant having been more than double *i.e.*, from 12·2 per cent to 27·2 per cent. Similarly the figures for each Natural Division show a marked increase. In the East Rajasthan Plain Division it has increased from 10 to 28·3 in the Dry Area Division from 15 to 30; in the Hills Division from 8·3 to 17·9 and in Plateau Division from 16·1 to 28·9 per cent.

35. In Ajmer State there has been a significant increase. In the age group 5 9 literacy has increased from 34·1 to 72·4 per cent, in the age group 5–14 from 50 to 102 per cent and in the age group 5 and upwards from 50·7 to 92·1 per cent.

36. The difference between males and females with respect to education is more extreme in this part of the world than anywhere else. This is the outgrowth of an ancient prejudice against the education of women as such, and against the employment of women in pursuits where they would need education. The masculine tradition in the schools is great. Even elementary schools are separate for boys and girls.

37. No wonder the male literacy exceeds the female literacy. For every literate woman in the population (the sex ratio being held constant) there were in 1931 approximately 14 males. literate, and in 1941 a little more than 9. In 1951 the number is about 5. If these ratios seem remarkable, let us look back to 1901, when there were 37 literate males for every literate female. The truth is that these States are gradually overcoming their prejudice. The literacy of females has been growing much faster than that of males. If the trend continues, the sexes will eventually become equal in this regard, but it will take a long time yet.

38. The relative literacy of males and females needs to be broken down according to age. In the last three censuses, for example, the number of males literate for every female in this category (the sex ratio being held constant) was as follows:—

TABLE No. A-11

Reduction in the sex inequality in literacy from decade to decade.

Age groups	Literates per 100 of population in					
	1931		1941		1951	
	Rajasthan	Ajmer	Rajasthan	Ajmer	Rajasthan	Ajmer
All ages	14·1	6·6	9·5	5·0	5·1	3·6
5-9	8·5	3·6	6·2	2·8	3·0	2·1
10-14	10·0	4·0	6·9	3·3	4·1	2·5
15 19	12·4	5·4	7·2	4·2	4·2	2·9
20 and over ..	17·6	8·2	11·5	6·2	6·8	5·2

In other words, the older the individuals the greater is the inequality between men and women. This fact, which is more pronounced the further back one goes in time, confirms the peculiar trend depicted above. If women have been gaining in literacy compared to men, they can be expected to show greater equality, with men in the younger than in the older ages.

as managers, clerks, and servants of Educational and Research Institutions including Libraries and Museums, of whom 5,032 are males and 470 are females. The corresponding number in Ajmer is 776 males and 70 females.

44. In Rajasthan as many as 12,752 males and 1,821 females have returned their occupation as Professors, Lecturers and Teachers other than those employed in Universities, Colleges and Research Institutions while the corresponding number in Ajmer is 1,533 males and 255 females. Their proportion per lac of population comes in Rajasthan to 83 males and 12 females and in Ajmer 224 males and 37 females.

45. The number of Professors, Lecturers, Teachers and Research workers employed in Universities, Colleges and Research Institutions in Rajasthan is 818 males and 146 females and in Ajmer 186 males and 104 females and their proportion per lac of population comes to 5 among males and 1 among females in Rajasthan and 27 among males and 15 among females in Ajmer.

46. Before making use of these figures their doubtful nature due to an insufficient description of occupation in the Enumeration slips referred to in para 9 above has to be kept in mind.

Educational Problems.

47. To understand the present status of education in Rajasthan and Ajmer, we must glance at the forces favouring and the forces opposing its growth. In Western civilization education has represented (at least in part) a channel of vertical mobility in the social scale. It has provided training for urban occupations of high social status and high technological content, adapted mainly to an expanding commercial and industrial society. Much of this educational development in the West has occurred since the British entered India, with the result that its spirit has grown progressively away from that indigenous to India. Since the days of Macaulay the British have attempted to diffuse their own educational system to the Indians. The peculiarity of the diffusion has been that the Western model collides with two great realities in Hindu life-ruralism and caste. The rural masses find no real utility in book learning designed for business-men, scientists, and scholars, and requiring leisured years to master. To them the Western school house is a non-functional institution, a needless expense. At the same time, in the caste order a channel of social mobility is extremely inappropriate and paradoxical, since the essence of caste is the lifetime fixity of social station. We could expect, therefore, that the progress of Western education, as shown by statistics of literacy, would be gradual rather than rapid, and that it would be accompanied by a breakdown of the Indian social order. Actually the progress in literacy has shown some acceleration especially since 1931, and our social order has shown a corresponding change.

48. Just as in other developing areas, so in this region one escapes from an exclusively agricultural economy has lain in widespread education, and yet ruralism has itself made this extremely difficult. "Parents are not satisfied that education does their children good, and it deprives them of their services. The Indian peasant has ordinarily no occasion, religious or secular, to read or to write. Such reckoning as he has to do he can do without formal instruction. Education, further is an expensive luxury. Even free education costs money, and money is a commodity which is very scarce in our country side. It is not only that the child has to be supplied with books, slates, and other school materials, the cost rising with the stage of advancement, the matter of apparel is even more important. The cultivator's child who would at home spend most of his days in a loin-cloth has to be much more expensively equipped for school-going."*

49. "The illiterates for the most part are caught in a vicious circle they are ignorant because they are poor, and they are poor because they are ignorant. Where to tackle the vicious circle first is a moot point, but common sense would suggest that it must be tackled on several fronts

* Population of India and Pakistan by Kingsley Davis Page. 159.

at once. This, in fact, is what is being done. The surprising thing, in view of the overwhelming handicaps, is the amount of progress that has been made. It has apparently been made because education offers the people a way to attain some of the things they want, and once they see the possibility, they grasp at it eagerly. The people in the cities and towns, in the middle classes in business and industry, and in the army and Government services have learned the value of education. The Government has helped to diffuse this attitude. The unwieldy but persistent drive toward modernization in India is thus reflecting itself inevitably in the demand for wide spread education." 1

50. "(c) The obstacles to educational progress in the region seem almost overwhelming, and they are all intricately inter-connected so that one rein forces the other. The extreme poverty of the masses makes even the small outlay necessary for school expenses difficult for parents to bear. It also hinders the Provincial Governments in their attempt to support education in the manner required for really rapid gains. The predominently agricultural character of the economy has made formal education seem of little value, and since the educational ideas have been imported from industrial nations, they have often seen little value in sending older children to school when they could be adding to the family income at home. The traditional view that education is the monopoly of particular castes has taken a long time to die. Also the multiplicity of languages plus the fact that much of the education has been conducted in a foreign tongue (English), has had a retarding influence. Finally, the rate of population growth, with the inevitably large proportion of the population in the childhood ages, has made education still more of a burden. Reflecting on this network of interrelated obstacles, one is amazed at the progress that has actually been made." 2

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1 Population of India and Pakistan by Kingsley Davis, Page 161.

2 Ibid Page 152.

SECTION 2.

Religion.

1. The observations contained in this section are based on the statistics contained in State Table D-II published in the Report, Part II-A. The corresponding tables in the past censuses were in 1941, Imperial Table No. XIII Community, in 1931, Imperial Table No. XV Religion and in 1921 Imperial Table No. VI Religion.

Reference to statistics.

2. The concept of religion has been changing from decade to decade for the purpose of Census operations. In 1901 Animism was treated as separate religion, in 1931 Animism was replaced by the Tribal religion and in 1941 the concept of religion gave place to that of community. All these changes reduce the comparative value of the figures.

3. In the Census of 1951, there was a question No. 2 (b) for returning the religion of each individual. The enumerators were asked to enter the religion, as may be stated by the citizen and sects were not to be recorded. The instructions were clear enough; there was no confusion either in the minds of the enumerators or in those of the citizens and it can safely be said that these statistics are more accurate than some other census returns.

Religion—Its demographic aspects.

4. Since religion is still taken seriously in this country it plays an important role in the life of the people. Among its effects the following two may be noted:—

(1) *Technological backwardness*:—Whether Muslim, Hindu, Sikh or Jain, religion in India is not limited to the vague and ultimate affairs of life, not confined to one hour per week, but is practiced every day and with minute and literal detail. The people are still living in a sacred society where both means and ends are viewed in religious light. This means that the scientific empirical and business-like approach to the world is subordinated to a multiplicity of specific and relatively rigid beliefs and rituals. The result is a strong resistance to technological change. If it is a question of agriculture, technological advance is hindered by caste restrictions on types of labour by dietary taboos, and by the ritual value of dung. If it is a question of medicine, progress is retarded by the taboo on the treatment of women by male physicians, the prejudice against women entering the nursing profession, the definition of midwifery as an 'unclean' occupation and the taboo on contact with dead bodies and hence dissection. If it is a question of business, economic advance is handicapped by the Muslim taboo on money lending, heavy borrowing for ceremonial rather than productive purposes, by obligations within the joint family and by the occupational restrictions of caste.

(2) *Political conflict*:—When religion is taken seriously and is applied to all aspects of life, the adherents of different faiths become peoples set apart. Each group tends to have its own folk ways and mores, its own outlook and its own allegiance, superior to all others. Each faith thus becomes a nation within a nation. The Hindu term for religion, Dharma, is much broader than that believed by the Westerners. It covers the whole field of conduct in all its wide relations. Similarly Islamic civilization is centred around the religion of Islam. Its doctrine makes a bifurcation of a civilization into the Islamic, which fundamentalist Muslims regard as God-inspired and the only true and defensible civilization and all other civilizations which are by nature heterodox and false. As a result there has always been conflict between the two, flaring up at different times.

5. A brief account of each religion sufficient for a proper appreciation of its demographical aspects is given below.—

A brief account of each religion.

6. On the level of its supernatural content it possesses three outstanding characteristics: first a doctrine of radical immanence (pantheism) which finds God in every thing; second a tendency towards tolerance syncretism, which allows it to incorporate almost any ritual or deity into its own system; and third a complex conception of individual destiny, contained in the doctrines of Karma, reincarnation and Moksha. On the level of its social content—that is, its manifestation in social behaviour-Hinduism becomes even more distinct. To an exceptional degree it is bound up with a specific social order, the outstanding institutions of which are the caste system, the joint family and the rural village (themselves mutually related and interdependent.) Indeed since it is this order to which its supernatural content refers, the social system forms the fundamental basis of Hindu unity.

Hinduism.

7. At the time of their foundation in the sixteenth century the Sikhs were a Vaishnava sect. They retained the Hindu pantheon, as well as the Indian social system and the doctrines of Karma and reincarnation. Their chief difference lay in their denial of divine incarnations, their disbelief in idolatry (which prevented their worshipping in Hindu temples), and their distrust of asceticism "Sikh" means disciple and "Guru" means teacher. There were ten successive Gurus, the succession being stopped by the declaration of the last who died in 1709, that the sacred literature (Granth Sahib) written primarily by the first and tenth Gurus, should be sufficient.

Sikhism.

8. It was not until the end of the 17th century that the sect began to diverge markedly from the Hindu pattern. By virtue of its geographical location between Muslim and Hindu areas, Sikhism had long shown a certain tendency towards militant solidarity. As a result it had frequently aroused the suspicion of the Muslims. The last great Mughal emperor Aurangzeb put to death the ninth Guru in 1675 and continued to persecute the sect as did his successors. It was hatred of the Muslims that served to unite the Sikhs. In the crisis the tenth Guru invited all Sikhs to form by mutual covenant a sacred league (Khalsa) within which caste would disappear and each man would become a warrior, would regard every other member as brother, and would vow to fight to the death for his faith calling themselves "Lions" each adding the word Singh (Lion) to his name. A great number of Sikhs responded to this call and formed themselves into a redoubtable army of heroes. The Khalsa, however, was not at first successful But the ideal of the Khalsa lived on and eventually the faithful were remarkably successful. As the Mughal Empire gradually crumbled, Sikh bands gained power and prestige. They organised two small democratic republics, later, twelve petty States and finally under Maharaja Ranjit Singh, who ruled from 1800 to 1839, they were united in a monarchical nation in Punjab. The Sikh nation went to war twice with the British in 1845 and 1848. In consequence they lost their sovereignty and settled down under British rule as simply another religious minority seeking political advantages and economic improvement. They also possessed a strong military tradition and were consequently used largely in the Indian Army, where they gained not only financially but educationally.

9. Jainism is far older than Sikhism. It is said to be slightly older than Buddhism, having arisen with Hinduism in the sixth century B. C. It retains most Hindu doctrines but is distinguished by carrying to an extreme the doctrine of radical immanence. This doctrine, the concrete expression of which is Ahimsa (non-injury) would result in extreme asceticism, were it not for the sharp distinction among Jains between the laity and the monks. The Jains possess one of the most ancient monastic orders in India and one of the most ascetic. The Jain laity on the other hand has always been remarkably successful in worldly affairs and they were one

Jainism.

of the first religious groups to take advantage of Western education, prospering exceedingly in business under British rule. Worldly success however is not causing the Jains to grow in numbers. On the contrary they seem to be numerically stationary and to be declining as a portion of the total population, as the Census returns show.

Islam.

10. Islam first came to India about 650 A.D., only a few years after the prophet Mohammed's death. Not until A.D. 1000 however did Islam really take hold in India. After that date, beginning with the Mahmud Kingdom and ending with that of Jahangir, large portions of India were controlled by a succession of Muslim dynasties. Yet Hindu civilization maintained its vitality under Muslim rule. Islam never achieved complete territorial dominance over the peninsula for there were always some areas beyond its control and others where control was exercised only through Hindu Princes and nobles. Furthermore, although there were mass conversions, the country was too vast, the invaders too few, and the volume of immigration too small to change the social complex. India, therefore, remained simply a Hindu country in which Muslims also formed a part of the population. Their influence in Rajasthan was remarkably low as the Rajputs of this place either opposed their encroachments or were allowed to retain their internal independence.

Christianity

11. "Christianity came into India many centuries before either the Portuguese or the British. Hinduism is so largely a social system, and the Indian Christians so definitely a part of it, that Christianity has certainly had to effect some compromises. The early Jesuits adapted themselves to Indian customs to attract converts. Some Indian Catholics still observe caste, employing caste marks in some cases; they also use the "tali" instead of a ring in marriage and retain other Hindu customs. Even the Protestants observe restrictions on interdining. The fact that most of the Christian converts have come from the untouchables and the primitive tribes, has not increased the likelihood of their having a firm grasp of Christian principles. Social customs, such as early marriage, treatment of women, etc., do not change with the change of one's faith*" Christianity made its appearance in Rajasthan only recently. The oldest mission in Rajasthan has been working for more than a century. It has rendered valuable help through its medical and educational institutions. There are only six missions working at present.

TABLE No. A-13.

Proportion of the followers of main religions in the population of Rajasthan and Ajmer State

Religion		Number per 1000 of the total population	
		Rajasthan	Ajmer
Hindus	..	907	865
Muslims	..	62	71
Jains	..	22	46
Sikhs	..	9	6
Christians	..	less than one	6

Strength of Main Religions.

12. Table No. A-13 gives the proportionate strength of the followers of each religion according to the Census of 1951, for Rajasthan as well as Ajmer State. From a numerical point of view the only two religions important in Rajasthan are Hinduism and Islam. In 1951 these together included 96·9 per cent of the total population, Hinduism claimed 90·7 per cent and Islam 6·2 per cent. The third most important religion is Jainism with a strength of 2·2 per cent and Christianity comes far behind with less than 1 per cent of the population as its followers. In Ajmer State Hindus form 86·5 per cent, Muslims 7 per cent and Jains 4·6 per cent, Other Religions returned in the present Census in Rajasthan and Ajmer together with the actual number of the followers of each can be seen in the table A-14 below,

* Population of India and Pakistan by Kingsley Davis page 186.

TABLE No. A-14.

Other religions and their strength

Religion	Persons			
	Rajasthan		Ajmer	
	Males	Females	Males	Females
Buddhists ..	17	24	1,903	2,416
Zoroastrians ..	240	260	109	153

Comparison with previous Censuses.

13. Table No. A-15 compares the proportionate strength of the followers of each main religion in each decade.

TABLE No. A-15

Proportionate strength of main religions in each decade.

Religions	Number per 100 of the population in the years							
	1881	1891	1901	1911	1921	1931	1941	1951
Rajasthan								
Hindus	87	84	83	83	83	85	75	90·7
Muslims	9	8	10	9	9	10	9	6·2
Jains ..	4	3	3	3	3	3	3	2·2
Tribals or Animists ..	..	5	4	5	5	2	12	..
Ajmer								
Hindus	81·6	80·7	79·8	77·7	73·6	77·5	80·2	86·5
Muslims	12·5	13·7	15·1	16·2	20·5	17·3	15·4	7·1
Jains	5·3	5·0	4·2	4·0	3·7	3·5	3·2	4·6
Tribal or Animists ..	..	..	..	0·8	1·0	0·3	..	..

In Rajasthan the Christians and Sikhs have been below 1 per cent throughout. The decline in the proportionate strength of Hindus in 1941 is explained by the entry as Tribals of some of the hill tribes like Bhils, and the sudden rise in 1951 is again due to the tribal people having returned their religion as Hindus or Muslims as the case may be. The sudden decrease among the Muslims may be due to their emigration to Pakistan and the immigration of Hindus from Pakistan. The Jains seem to be steady throughout and the decline in 1951 is due to the tendency among some of them to return themselves as Hindus. In Ajmer the figures show the same trend as in Rajasthan. Amongst the Muslims a considerable decline (8·3 per cent) is noticeable which can be attributed to the mass movement of population as a consequence of the Partition of India. The tribal population has been largely assimilated to Hinduism as regards its religious practices. In order to ensure comparability of the data compiled at previous censuses with 1951 results those who at the Census of 1921 and 1931 were returned as professing an Animist or Tribal religion, are treated as Hindus in the table in para 13 above (Strength of Main religions) The average enumerator has always tended to regard the aboriginal tribes as Hindus, and Hindu influence pervades practically every Tribal religion. The vast majority are Hindus or follow a form of worship that is virtually indistinguishable from Hinduism. Largely because of the difficulty presented by the religious classification of Tribals there was a change from a Religion to a Community return in 1941. In 1951 the religion was to be returned as stated, and in practice it was found that all Tribals returned themselves as Hindus.

14. The religious composition of the Rural and Urban population of Rajasthan can be seen in Table No. A-16 below:—

Distribution—(a) Rural and Urban Distribution.

TABLE No. A-16

Religious composition of Rural and Urban population in Rajasthan and Ajmer.

Name of religion	Percentage to total population in			
	Rajasthan		Ajmer	
	Rural	Urban	Rural	Urban
Hindus	93 57	76·81	88·73	83·46
Sikhs	1·03	0·52	0·06	1·25
Jains	1·44	5·48	3·1	6·63
Buddhists	Negligible	Negligible	..	1·45
Zoroastrians	Negligible	Negligible	..	0·09
Muslims	3·94	17·02	7·83	6·01
Christians	0·02	0·16	0·28	1·11

It would appear that in Rajasthan, Muslims, Jains, Buddhists, and Christians are more urbanised than Hindus and Sikhs. The characteristic feature of the distribution is that Hindus being attached more to agriculture inhabit the Rural areas in large numbers, while Muslims and Jains who seem to have an attraction for trade, commerce and industry show an inclination for residing more in towns. In Ajmer the condition is slightly different. Here Jains, and Christians are more urbanised but not the Muslims. There are no Buddhists and Zoroastrians in the rural areas.

15. The religious composition of the population in each of the Natural Divisions can be seen in Table No. A-17 below:—

(b) Distribution in Natural Divisions.

TABLE No. A-17

Religious composition of the population of Natural Divisions.

Name of Religion	Number per 100 of the total population in			
	East Rajasthan Plain Division	Rajasthan Dry Area Division	Rajasthan Hills Division	Rajasthan Plateau Division
Hindus	92·03	86·54	93·91	92·24
Sikhs	0·39	2·45	0·01	0 26
Jains	1·15	3 35	3·28	1·47
Buddhists	Negligible	..	..	Negligible
Muslims	6·41	7·62	2·71	5·95
Christians	Negligible	Negligible	Negligible	Negligible
Zoroastrians ..	Negligible	Negligible	Negligible	Negligible

It is interesting to see that in the Dry Area Division of Rajasthan and in the Ajmer State the proportionate numerical strength of the Hindus is comparatively lower due to the existence in those places of Sikhs, Jains and Muslims in larger proportions than in other Divisions, otherwise the strength of Hindus is more or less uniform. Sikhs are more prominent in Dry Area Division due to its vicinity to the Punjab and their colonization in Ganganagar District. Similarly Jainism is more prominent in Rajasthan Dry Area and Ajmer State. The Muslims are in larger proportion in the Dry Area Division and Ajmer State, being 7·6 and 7·05 per cent respectively. The Muslim population varies from 7·6 to 2·7 per cent, and between these it is almost evenly distributed, the least percentage being in the Hills Division. Amongst the Christians in the Natural Divisions it is seen that they are 0·1 per cent in the Hills Division and 0·63 per cent in Ajmer. In other Divisions they are numerically insignificant. As for Zoroastrians and Buddhists their meagre proportions do not admit of any discussion. The actual population of the Zoroastrians in East Rajasthan Plain Division and Ajmer State is 386 and 262 souls respectively. The Buddhists have been found in the following districts only namely, Jaipur (13 males 2 females) Bhilwara (3 males 4 females) and Bundi (1 male only.)

(c) Distribution in Districts

16. Subsidiary table 7·7 in part I-B of the Report shows the religious composition of districts. The percentage of Hindus varies from 95·6 in Dungarpur District to 74·7 in Jaisalmer District. It is note-worthy that Dungarpur has the maximum percentage of Hindus as there the Bhils who had been numerated in previous Censuses as Animists, declared themselves as Hindus this time. The percentage in Bhilwara District is 94·3; it closely follows Dungarpur. The percentage of Muslims is exceptionally high *i.e.* 24·6 in Jaisalmer and varies from 11·8 and 11·3 in Barmer and Bikaner Districts respectively to 2·6 in Dungarpur District. The percentage of Jains is the highest *i.e.*, 7·2 in Bikaner and varies from 5·5 and 5·3 in Jalore and Pali respectively to 0·3 in Jhunjhunu and Ganganagar Districts. The percentage of Sikhs is the highest *i.e.*, 17·5 in Ganganagar and 1·1 in Bharatpur District. In all other districts it is below 1 per cent. The strength of Christians in Rajasthan is 67·62 and their distribution in districts is much below 1 per cent, but they are found in all districts. The percentage of Zoroastrians and Buddhists is very insignificant.

Variation.

17. The Religions (Community Table XIII of 1941) enumerated in the Census of 1941, have been classified as Hindus, Muslims, Jains, Christians, Tribes and others. This classification does not coincide with that adopted in Table D-II, Religion of 1951, in which the classification is Hindus Sikhs, Jains, Buddhists, Zoroastrians, Muslims and Christians. For the sake of comparison in the Table No. A-18 below, 1951 figures for Sikhs Buddhists and Zoroastrians have been added up and compared with figures for 'others' in 1941. The Tribal figures have been similarly added to those of Hindus because most of them have now declared themselves as Hindus.

TABLE No. A-18.

Variation in the followers of each religion since 1941.

	Rajasthan			Ajmer		
	Actual population in			Actual population in		
Religions	1941	1951	Variation per cent.	1941	1651	Variation percent.
Hindus ..	10,317,805	13,862,150	+34·3	376,481	599,524	+59·2
Muslims ..	1,297,841	949,348	—26·9	89,899	48,886	—45·6
Jains ..	341,788	327,763	-4·1	18,827	32,004	+69·9
Christians ..	5,941	6,762	+13·8	5.783	4,413	—23·7
Others ..	83,576	144,774	+73·4	1,231	8,545	+594·1
Tribes ..	1,674,488					

The figures show that in Rajasthan there has been an increase in the general population by 14·9 per cent. Amongst Hindus the increase has been 34·3 per cent. But if we add the figures of tribes given in the Census of 1941 to those of Hindus, the increase comes to only 11·6 per cent. Amongst Muslims, there has been a decrease of 26·9 per cent. Due to mass movement between India and Pakistan (Hindus immigrated and Muslims emigrated) Rajasthan being on the border of West Pakistan along a line of more than a thousand miles, was affected to a considerable extent by this event. The total number of displaced persons enumerated in Rajasthan is 297,016 persons *i.e.*, 2 per cent of the Rajasthan's total population. In the case of 'Others' as well, there has been an increase of 73·4 per cent due to Sikh immigration. Amongst Christians there has been an increase of 13·8 per cent. Amongst Jains there has been a decrease of 4·1 per cent. As a partial explanation of this decrease one may note that because they observe the taboo on widow remarriage more strictly than any other religious group, the Jains have a low percentage of their married women aged 15—45. Not only does widowhood cut down Jain reproduction but the sect also has a low fertility within the marital relation, which is doubtless connected with their social position. They are the third most urban religious group, the third most literate and the second or third most prosperous one. The price they are apparently paying for their high social position is a low fertility. Since they do not acquire new converts this low fertility helps to prevent any growth in their number. There is also some evidence that they are losing some members who drift into Hinduism. It is also doubtful whether the numbers recorded are really accurate, as many returned themselves as Hindus. Sometimes there is no uniformity about this practice so that the comparative figures of Jains and Hindus are always liable to a certain amount of disturbance by influences which cannot be gauged statistically.

18. In the State of Ajmer from the above table it is seen that amongst Hindus there has been an increase of 59·2 per cent and amongst Muslims a decrease of 45·6 per cent which is also mainly due to the causes already mentioned above for Rajasthan. In the case of Jains and 'Others,' there has been an increase of 69·9 and 594·1 per cent respectively. Amongst Christians there has been a decrease of 23·7 per cent.

19. It would be interesting to compare the percentage strength of the followers of each religion in Rajasthan with that of the neighbouring States of U.P. and Bombay as shown in the table below.

TABLE No. A 19

Comparison of the percentage strength of the followers of each religion with neighbouring States.

Religions	Rajasthan Percentage	U. P. Percentage	Bombay Percentage
Hindus	90·6	85·4	88·40
Muslims	6·2	14·2	8·09
Jains	2·14	0·1	1·59
Christians	0·044	0.2	1·45
Sikhs	0·94	0·3	0·10
Zoroastrians	0·003	0·002	0·27
Others	0·0022	0.006	0·9

20. Table No. A-20 below shows the distribution of the followers of the various religions in each Natural Division. Out of the total Hindu population of Rajasthan, 43·7% live in the East Rajasthan Plain Division, 28·7 in the Dry Area Division, 14·2 in the Hills Division and 13·4 in the Plateau Division. Out of a hundred Muslims 44·5% live in the East Rajasthan Plain Division, 36·9 in the Dry Area Division, only 5·9 % in the Hills Division and 12·6% in the Plateau Division. Out of 100 Jains 23·0 have been enumerated in the East Rajasthan Plain Division, 47·0 in Dry Area Division, 20·9 in Hills Division and only 9·05 in the Plateau Division. Buddhists are only 41 in number, of whom Jaipur District contains 33, Bhilwara District 7 and Bundi District 1 only. Zoroastrians are the most numerous in Sikar District being 272 in number; in Jaipur 112, their number in Jodhpur is 33, in Udaipur 20 and in Sirohi 36, in other districts they are very few in number. Christians are almost evenly distributed in all the Natural Divisions. 23·3% of them are found in East Rajasthan Plain Division, 25·2 in Dry Area Division, 29·2 in Hills Division and 22·3 in the Plateau Division. 78·2% of the Sikh population are found in the Dry Area Division, and 17·9 per cent in the East Rajasthan Plain Division. In other divisions they are numerically insignificant.

TABLE No. A-20.

Distribution of the followers of each Religion in Natural Divisions of Rajasthan.

NATURAL DIVISION	NUMBER PER 100 OF						
	Hindus	Sikhs	Jains	Buddhists	Zoroastrians	Muslims	Christians
1	2	3	4	5	6	7	8
East Rajasthan Plain Division	43·7	17·9	23·0	97·6	77·2	44·5	23·3
Rajasthan Dry Area Division	28·7	78·2	47·0	..	7·2	37·0	25·2
Rajasthan Hills Division	14·2	0·2	21·0	..	11·2	5·9	29·2
Rajasthan Plateau Division	13·4	3·7	9·0	2·4	4·4	12·6	22·3

SECTION 3.

Language.

Significance of data on languages:

Data on languages spoken by the people of a country are more sensitive; under most circumstances, as a means of identifying ethnic groups than birth-place or citizenship data, although languages are by no means always sufficient in themselves for this purpose. In addition, certain types of data relating to languages are very useful in connection with problems of education, assimilation of immigrants, and communications with various linguistic elements of the population. The cross-tabulation of language with other demographic characteristics is of importance. For example, the tabulations of languages by age and sex are specially valuable as a means of analysing dynamic factors in the linguistic make-up of the population and understanding the social importance of various linguistic groups. Thus some indication of the future trend in the size of minority groups having a certain mother tongue can be obtained by determining how many of the various ages are children and adults. The distinction between the number of males and females in the various age groups permits insight into the problems of social relationships which their linguistic background may entail and into the influence which they may have on the cultural development of their families and associates.

Language classification:

2. A good deal of literature on the classification of languages is available in the previous Census Reports of India as a whole as well as those of Rajputana and Ajmer-Merwara. It will, therefore, be unnecessary to repeat the same here. Suffices it to say that at this Census the enumerator was asked to write down whatever name the respondent mentioned about the language; he was not to bother to find out whether it was the name of a language or a dialect or a sub-dialect. In the tabulation stage the language names so returned were classified according to the writer's knowledge and information of them, keeping in view the arrangement and classification adopted in the printed table volumes of the Census Reports of 1921 and 1931.

3. In the census questionnaire there were two questions: one 'Mother tongue" and the other "Do you usually speak any Indian language other than your mother tongue?" Infants, deaf-mutes and dumb persons were to be recorded with the same language as their mother tongue as that of their family members or chiefly their mothers. The information collected in response to these questions has been tabulated in Main Table D.I published in Report Part II-A, (Table D-I(i) Mother tongue and D-I(ii) Bilingualism). The instructions were simple enough both for the enumerator and the respondents and there is every reason to believe, that of all census statistics, those relating to language are the most accurate. There is no language problem in Rajasthan hence there was no other motive for an intentional vitiation of figures.

General linguistic distribution:

4. The distribution and classification of Indian languages has been very exhaustively dealt with in the Linguistic Survey of India, the very important volume published in 1927. What little remains for census to record is the corresponding increase or decrease in the number of speakers, since the area of any given tongue is hardly ever stable. According to Linguistic Survey, the vernaculars spoken in India (excluding those un-classed) are divided into four families, five sub-families, and 31 groups. These groups are again sub-divided into 177 Languages, and these again into 525 dialects. Languages spoken in these States (Rajasthan and Ajmer) all fall under the Indo-European family, Aryan sub-family, the Indo-Aryan branch and the inner sub-branch, and almost all in the central group, inasmuch as about 990 of every thousand persons speak the languages which are comprised in that group. Subsidiary Table 7·9 gives the number of speakers in the Aryan sub-family of the Indo-European family in its various branches and groups for Rajasthan only.

5. Altogether 58 languages and dialects have been separately compiled in the language Table D-I (i). Of these, 25 are languages and 33 dialects. Out of the 33 dialects 9 belong to places outside India (5 are dialects of Asian and 4 of European languages). Out of the remaining 24 dialects, 17 are dialects of Rajasthani which are known by different names according to the different parts of Rajasthan and Ajmer where they are mostly spoken. There are 5 dialects of Western Hindi, namely, Brij-bhasha, Bundel-khandi, Dangi, Hindi and Urdu; 2 are dialects of Bhili, *e.g.* Vagdi and Garasia

6. The Table No. A-21 below shows the principal languages spoken in Rajasthan and the strength of their speakers, actual and percentage, as recorded in the 1951 Census.

TABLE No. A-21.

Principal Languages Spoken in Rajasthan and Ajmer and the strength of their speakers.

Language	Number of speakers		Percentage to total population	
	Rajasthan	Ajmer	Rajasthan	Ajmer
Rajasthani	10,678,142	521,526	69·84	75·20
Western Hindi	3,360,546	106,961	21·98	15·40
Bhili	792,557	..	5·18	..
Sindhi	125,028	44,137	0·81	6·40
Punjabi	251,066	16,557	1·64	2.40
Gujrati	51,429	1,566	0·34	0·23
Marathi	12,405	651	0·08	0·09
Others	19,624	1,974	0·13	0·28

It should be noted here that the strength shown against each language in the above table represents the number of speakers who have returned that particular language as their mother tongue. Nearly, 70 per cent of the people of Rajasthan, and 75 per cent of those of Ajmer, speak Rajasthani as their mother tongue. In the Rajasthan Dry Area Division the dialect more common is Marwari. In Kotah, Bundi and Jhalawar Districts it is known as Harauti. In Chittorgarh, Udaipur and Bhilwara Districts, the dialect spoken is Mewari. In the East Rajasthan Plain Division, it is called Dhundari. Jaipuri is a sub-dialect of Dhundari and is spoken in Jaipur District. Kishangarhi and Bikaneri are sub-dialects of Marwari spoken in Kishangarh sub-division and Bikaner district. In Dungarpur and Banswara Districts where the Bhils form a major part of the population the language in common use is known as Bhili and its dialect Wagdi. Bhili is really a mixed language or dialect. In Rajasthan it is a mixture of Mewari and Gujrati. In Bombay it is the mixture of Marathi and Gujrati. Bhili is really nothing but a language spoken by Bhils and as the Bhil population is scattered in India in the various States, their language assumes the form of a mixture of the languages spoken in the locality in their perverted form.

7. Next to Rajasthani, Hindi has the greatest numerical significance, as 22 per cent. or more than 1/5th of the people of Rajasthan have returned it as their mother tongue and nearly 1/7th or 15·7 per cent. in Ajmer. The speakers of Rajasthani and Western Hindi combined constitute more than 90 per cent. of the population in each of the States, Rajasthan and Ajmer. Third in importance is Bhili which is the mother tongue of 5 per cent of the population. The above three are the languages of the region. Other languges found in these States are spoken all combined by nearly 3 per cent. of the population in Rajasthan and 10 per cent. in Ajmer State who are mostly immigrants from the localities where these languages are spoken as the languages of the region.

8. Variation in the strength of speakers of the main languages since 1921 is given in the Table No. A-22 below:

Variation:

TABLE No. A-22.

Distribution of the total population by languages in the past and present censuses.

Language	Total speakers			Per 1,000 of total population		
	1951	1931	1921	1951	1931	1921
Rajasthani ..	10,678,142	8,606,659	7,678,180	698·4	766·7	751·0
Western Hindi ..	3,360,546	1,721,185	2,127,621	219·8	153·3	195·8
Bhili	792,557	719,640	421,905	51·8	64·1	42·8
Sindhi	125,028	12,840	55,620	8·4	1·14	5·4
Punjabi	251,066	125,149	21,045	16·4	11·2	2·1
Gujrati	51,429	20,064	19,808	3·4	1·2	1·9

The percentage strength of the speakers of Rajasthani rose from 75 in 1921 to nearly 77 in 1931 and fell again to nearly 70 in 1951, due mainly to the corresponding increase in the proportionate strength of the speakers of Sindhi and the Punjabi due to special immigration. The overall increase in the proportionate strength of the Bhili speakers corresponds roughly to the growth in the population of Bhils since 1921. The rise in the proportion of Hindi speakers is partly due to the immigration from the Uttar Pradesh and to some extent to the sentiment which induces some of the Rajasthani speakers to return Hindi as their mother tongue on the assumption that Rajasthani is only an offshoot of Hindi.

9. The following Table No. A-23 shows the linguistic composition of the Natural Divisions.

Linguistic composition in Natural Divisions.

TABLE No. A-23.

Linguistic composition of Natural Divisions.

Natural Division	Speakers per 1,000 of total population.							
	Rajasthani	Western Hindi	Bhili	Sindhi	Punjabi	Gujrati	Marathi	Others
East Rajasthan Plain Division.	593	380	1	10	11	3	1	1
Rajasthan Dry Area Division.	847	102	2	9	37	2	..	1
Rajasthan Hills Division.	596	29	359	3	1	10	1	1
Rajasthan Plateau Division.	809	163	14	5	4	3	..	2

These figures show more or less the same pattern as we have seen in the case of Rajasthan State as a whole. A vast majority of the people are the speakers of Rajasthani in each Natural Division. Their proportion is highest in the Rajasthan Dry Area Division where 84·7 per cent. of the people have returned their mother tongue as Rajasthani. The lowest figure is found in the East Rajasthan Plain Division (59·3 per cent. only) it is closely followed by Rajasthan Hills Division (59·6). Rajasthan Plateau Division stands next to the Dry Area division (80·9 per cent).

10. Western Hindi comes next in every Natural Division except the Hills Division where Hindi stands third and Bhili occupies the second place, because it is in this Division that Bhils are mostly found specially in Dungarpur and Banswara Districts.

11. The highest figures of the speakers of the Punjabi language in Rajasthan are seen in the Rajasthan Dry Area Division due to (i) heavy immigration from the Punjab to this area specially in Ganganagar District for colonization in the canal area, (ii) the rehabilitation of the displaced persons from the Punjab.

12. The high figures of Gujrati Speakers in Rajasthan Hills Division when compared with other Divisions is due to its proximity to Bombay State resulting in a casual or marriage migration. Other languages, the figures of the speakers of which are given in the last column of the above Table No. 21 are Bihari, Madrasi, Tamil, Telugu, Bengali, European, Asiatic, etc., the speakers of which are numerically very insignificant. They seem to have migrated for service or business.

13. In all the districts of Rajasthan, the same pattern is more or less visible as is observed in the Natural divisions, details can be seen in the Subsidiary Table No. 7·8 given in Part I-B of the Report.

Intelligibility of dialects

14. The several dialects, so far as information goes, are mutually intelligible to their speakers, though there are local words and phrases in each of them, which are not easily understood outside the district where they are spoken, their mutual intelligibility grows weaker and weaker, as the distance between the speakers of the various dialects increases and the inter communication between them decreases.

Influence of education and travelling on languages.

15. The spread of education, easy facilities of communication and extensive travelling, gradual disappearance of prejudice against leaving homes and other similar causes have brought about a remarkable change in the dialects spoken in homes. There is undoubtedly a greater admixture of words of foreign tongue which have now crept in daily parlance of people. There is a distinct tendency amongst men to use foreign words necessitated by circumstances and they are thus becoming popular and intelligible to all. The first great war as well as second world war in which most of the rural population took part, has been an important factor in introducing many new foreign words in their homes and society which have now been absorbed as a part of their daily dialect. English words are now freely used in conversation and are gradually introduced in literary Hindi and Urdu articles written and published.

17. Attempts made by enthusiastic writers of Hindi to avoid the use of foreign words and sentences have given rise to another very serious change namely making the language so learned, bombastic and difficult as to be entirely un-intelligible to common readers Further success in these attempts will widen the gulf between the spoken and written language as has been the case with Bengali.

Differences in dialects as spoken by men and women

18. In many districts there is said to be little difference in the dialects as spoken by men or women. But it is stated that in Bharatpur sub-division the women speak a more corrupt form of Mevati and Dangi. In Bundi there is a considerable difference. In Jaipur there is some, and in Jodhpur Division and Jhalawar District men are said to intermingle Urdu words with their dialects, which women do not.

Displacement of languages

19. In 1921 Census Report of India Mr. J. T. Marten stated, "The subject of displacement of languages and dialects by the stronger and more developed tongues is one in which the census statistics have usually been able to throw some interesting light in spite of the many difficulties for them to obtain. So far as the displacement of non-Aryan by Aryan languages is concerned there is, apart from the question of racial fusion, abundant evidence of the decay of original tongues wherever they come into contact with the Aryan languages."

Special features of languages in Rajasthan and Ajmer.

20. Urdu: Speakers of Urdu comprised of (0·1) per cent of the population in Rajasthan and in Ajmer 0·7 per cent. a slight decline since 1921 is visible. Following the past practice this language was tabulated under Western Hindi. In Rajasthan and Ajmer States a considerable proportion of those persons who returned Urdu as their mother tongue can and do speak the regional languages with equal fluency. In Rajasthan 6·2 per cent. of the population are Muslims but Urdu speakers are only (0·1 per cent). Muslims in Ajmer State form 7·05 per cent. of the population whereas the proportion of Urdu speakers there is only 7 per 1000. In other words most of the Muslims residing in Rajasthan and Ajmer States speak Rajasthani as their mother tongue.

21. The extent to which the principal language of a district is spoken by a majority of the population found in a district at the time of the census is an indication of the linguistic homogeneity of an area. The position is, however, some what obscured by the varying extent to which Bhili was returned as mother tongue in particular districts. Out of the 25 districts of Rajasthan, Rajasthani forms the mother tongue of more than 90 per cent of the population in eight districts. Bhili forms the population of a great majority in the districts of Dungarpur and Banswara where 94·4 and 92·0 per cent respectively of the total population of the districts are its speakers. Hindi is significant in the District of Bharatpur (68·3 per cent) adjoining U.P. and its next door neighbour Sawai Madhopur (65·9). Punjabi is prominent in the district adjoining Punjab *viz.* Ganganagar (26 per cent.)

Bilingualism.

22. For the first time, a column was provided in the General Schedule in the Census of 1931 in which to record "any other language in daily or domestic use." As was to the expected, the result was that the record was full of such entries as Marwari as Mother tongue and Mewari as a subsidiary language. It was, thereupon decided that all entries containing dialects of Rajasthani and Western Hindi as alternatives were not to be treated as constituting true bilingualism. Similarly, bilingualism due to immigration such as would be shown for a Punjabi motor driver working in Jaipur, was not compiled. The record was, therefore, reduced to a compilation of entries for combinations of Rajasthani, Bhili, Sindhi, Gujarati, Punjabi in the north-west, west and south west of the Agency in border tehsils.

23. Col. Cole, the Superintendent of Census Operations, 1931, lays down in the Report that "The results were disappointing. No result was sufficiently large to show on the Linguistic map. The conclusion must therefore, be drawn that no genuine bilingualism exists in the Agency." He has also quoted from the Report on the Linguistic Survey of India that "The identification of the boundaries of a language, or even of a language itself, is not always an easy matter. As a rule, unless they are separated by great ethnic differences or by some natural obstacle such as a range of mountains or by a large river, Indian languages gradually merge into each other and are not separated by hard and fast boundary lines.....for instance, near Bhatner (Hanumangarh in Bikaner State) there is spoken a mixture of Punjabi and Rajasthani. The Punjabis say that it is Rajasthani but the Rajputs (sic) say that it is Punjabi". As we follow the southern boundary of Marwar where it marches with Palanpur, the Gujrati element is still stronger .....Here the language is so mixed that while the Marwar people call it Gujrati, the Palanpur people (whose native language is Gujrati), call it Marwari. For want of a better name I call it Marwari-Gujrati."

24. In the present Census if a person commonly spoke any Indian language other than his mother tongue in daily or domestic life, the name of the language was recorded, and information about the extent and nature of bilingualism was abstracted after the census. The bilingualism related not to the ability to speak another Indian language, but to its employment in daily life.

25. Two main types of bilingualism can be distinguished as (a) the territorial bilingualism that arises in those border areas where the regional languages co-exist, and (b) the socio-economic bilingualism that arises out of the necessity of immigrants to employ a regional language, or a *lingua franca*, as a means of communication. It follows that the more linguistically homogeneous an area, the smaller the percentage of bilingualism. Thus, among the persons who speak as a mother tongue the three great regional languages of Rajasthan and Ajmer *viz.* Rajasthani, Western Hindi and the Bhili the proportion of bilingualism among Rajasthani speakers in Rajasthan was only 38 per 1.000 as against 93 among Hindi speakers and 23 among Bhili speakers. In Ajmer State bilingualism among the speakers of Rajasthani is 61 per 1.000, that among Hindi speakers is 166. Sindhi alone among the languages in Ajmer returned a proportion of bilingualism nearly as high as 396 per 1,000. This language is not indigenous to Ajmer but is the Mother tongue of the displaced persons from Sindh. In Rajasthan also bilingualism among Sindhi speakers exists to the extent of 237 per 1.000. This is due to displaced persons from Sindh who have settled in the various districts of Rajasthan. These Sindhi speakers are from the Western Pakistan and have been found to be bilingual in Punjabi and Urdu.

26. Urdu is not a regional language in the sense of having a well defined region where the speakers of the language constitute an important block. The majority of the speakers of the language were not immigrants, but Muslims who were indigenous to the areas where they resided, and in consequence spoke the regional languages. Ten per 1,000 of the persons who returned Urdu as their mother tongue in Rajasthan were bilingual in Rajasthani.

TABLE No. A 24.

Number per 1,000 of total population who speak subsidiary languages mentioned in Col. 1.

Languages	Rajasthan	Ajmer
Rajasthani ..	26·7	46·3
Western Hindi ..	20·5	25·7
Bhili .. .	1·2	
Gujrati	1·1	1·1
Punjabi	1·6	10·5
Sindhi	1·9	25·2

27. Let us now examine the Bilingualism of the languages which are chiefly spoken in the States that is to say how far the main languages of these States are subsidiary languages. The marginal Table No. A 24 will show the details. The figures show how little is the extent to which Bhili, Gujrati, Punjabi and Sindhi are spoken as subsidiary languages in Rajasthan. Comparatively it is larger in Ajmer than in Rajasthan.

TABLE No. A.-25

Number per 10,000 of the speakers of Rajasthani as their mother tongue who speak subsidiary languages mentioned in Col. 1.

Subsidiary language	Speakers per 10,000
1	2
Western Hindi	359
Bhili	4
Sindhi	3
Punjabi	6
Gujrati	7
Marathi	2
Others	2
Total ..	383

28. Now we shall examine the extent of bilingualism existing among the speakers of various languages found to be spoken as mother tongue in Rajasthan. To start with Rajasthani, we find that it is the mother tongue of 10,678,142 persons out of whom only 38 per 1,000 persons speak other subsidiary languages also in their daily or domestic life as shown in the inset Table No. A-25. Out of them as many as 36 per 1,000 speak Western Hindi as their subsidiary language. A great majority of them are found in Bharatpur District which adjoins Uttar Pradesh and of which Western Hindi is the regional language. The insignificant proportion of its bilingualism in the speakers of other languages mentioned in the Table above deserves no special comment except that Rajasthan touches Gujrat on one side specially the Sirohi District, Punjab on the other specially, Alwar and Ganganagar Districts and Sindh on the third specially Jaisalmer and Barmer Districts, where this much amount of bilingualism must be expected.

TABLE No. A-26

Number per 10,000 of the speakers of Western Hindi as their mother tongue who speak subsidiary languages shown in Col. 1.

Subsidiary language	Number of speakers per 10,000
1	2
Rajasthani	826
Bhili	29
Sindhi	8
Punjabi	33
Gujrati	32
Marathi	3
Others	3
Total ..	934

29. Amongst those who speak Western Hindi as their mother tongue we find from the inset table No. A-26 that as many as 93 per 1,000 persons are bilingual. Out of them as many as 83 per 1,000 speak Rajasthani as subsidiary languages. Of the remaining 10, 3 speak Gujrati, 3 Punjabi and 3 Bhili. The remaining 1 per 1,000 speaks Sindhi, Marathi and other languages as subsidiary to their mother tongues.

TABLE No. A-27.

Number per 10,000 of the speakers of Bhili as their mother tongue who speak subsidiary languages shown in Col. 1.

Subsidiary language	No. of speakers per 10,000
1	2
Rajasthani	16
Western Hindi	193
Gujrati	22
Others	5
Total ..	236

30. Amongst those who have returned Bhili as their mother tongue only 24 per 1,000 speak subsidiary languages as shown in the inset Table No. A-27. Of them 19 speak Western Hindi. These seem to be people from the Bhil area in the employment of the Bhil Corp who come in contact with the officers from outside and as they are transferred to various places they have to adopt Western Hindi as their *lingua franca*. 2 per 1,000 are speakers of Gujrati. This is because Gujrat adjoins Bhil area and a little less than 2 per 1,000 are the speakers of Rajasthani.

31. Amongst those who have returned Sindhi as their mother tongue as many as 237 per 1,000 are bilingual of whom 58 speak Rajasthani and 141 are speakers of Western Hindi. The proportion of others is very small as seen in the Table No. A-28 below:—

TABLE No. A-28

Number per 10,000 of the speakers of Sindhi as their mother tongue who speak subsidiary languages shown in Col. 1

Subsidiary language	No. of speakers per 10,000
Rajasthani	576
Western Hindi	1407
Punjabi	356
Gujrati	26
Marathi	3
Others	2
Total ..	2,370

TABLE No. A-29

Number per 10,000 ofspeakers of Punjabi, Marathi and Gujrati as their mother tongue, who speak subsidiary languages shown in Col. 1

Subsidiary language	Punjabi	Marathi	Gujrati
1	2	3	4
Rajasthani ..	170	125	1,332
Western Hindi ..	730	1,790	1,804
Bhili ..	..	.	17
Sindhi ..	49	2	43
Marathi	2	..	33
Gujarati ..	27	79	
Punjabi ..		7	75
Others ..	5	5	38
Total ..	983	2,008	3 342

32. Amongst the quarter million people who speak Punjabi as their mother tongue in Rajasthan 24,672 are bilingual. These are persons settled in the canal area of Ganganagar District either before partition or as displaced persons after partition. The position with respect to the speakers of other languages can be seen in the Table No. A-29 above.

33. The figures of Ajmer State present a more or less similar picture as shown in the Table No. A-30 below: —

TABLE No. A-30

Number per 10,000 of the speakers of languages shown in Col. 1 who speak as their mother tongue, the languages given in Cols. 2 to 9.

Mother tongue	Subsidiary languages								
	Rajasthani	Western Hindi	Bhili	Sindhi	Punjabi	Gujrati	Marathi	Others	Total
1	2	3	4	5	6	7	8	9	10
Rajasthani ...		587	..	11	7	4	3	3	615
Western Hindi ..	1,281	..	..	56	245	1	6	69	1,664
Bhili ..	..	..	..	..	..	..		..	
Punjabi ..	761	2,333	..	1,288	..	10	..	..	4,393
Sindhi ..	366	3,322	..	..	..	89	..	187	3,964
Marathi ..	46	4,439	..	..	..	..	..	5	4,490
Gujrati	1,066	3,972	..	..	..	..	..		5,038

34. The answers to the question on bilingualism concerned daily use, and not knowledge, of different Indian languages. Only one subsidiary language was to be recorded. Hence the returns did not reveal the extent to which Hindi, the *lingua franca* of India, was understood, but only the extent to which it was in daily currency.

35. In the table No. A-31 below, the principal languages in which people in Rajasthan and Ajmer States declared themselves as being bilingual have been shown in order of importance. Speakers of Vagdi and Garasia have been treated as having Bhili as their mother tongue and have not been analysed for the secondary characteristics of bilingualism in these languages as they are dialects. To the persons returned as bilingual in Hindi have been added 15 persons who have returned themselves as bilingual in Urdu or Hindustani.

TABLE No. A.-31.

Principal languages and the strength of their speakers as mother tongue or subsidiary languages.

Language	Number of persons speaking the language as a mother tongue		No. of persons returned as bilingual in the language at 1951 census	
	Rajasthan	Ajmer	Rajasthan	Ajmer
Rajasthani ..	10,678,142	521,526	408,968	32,083
Western Hindi ..	3,360,546	106,961	313,991	17,795
Bhili	792,557	461	18,715	..
Gujrati	51,429	15,666	17,189	789
Punjabi	251,066	16,557	24,672	7,271
Sindhi	125,028	44,137	29,632	17,749
Marathi	12,405	651	2,492	292

APPENDIX III

INFIRMITIES

Infirmities.

Introductory.

1. Question No. 13 in the list of Census questions was left at the discretion of the State Governments. Rajasthan and Ajmer Governments thererore. decided in accordance with the practice at previous Censuses, to collect information regarding four infirmities, namely insanity, deaf-mutism, total blindness and leprosy.

Instructions to enumerators.

2. The instructions to the enumerators regarding this querry sufficiently indicate the limitations of the returns. The enumerators were instructed to record the fact for each individual who was found to be insane, deaf and dumb, blind of both eyes or suffering from corrosive leprosy. They were also warned against recording as blind those who suffered from loss of the sight in one eye only, or as lepers, persons who suffered from leucoderma. These instructions were counsels of perfection and it is not claimed that the figures published in Table "Local Ka" are as reliable as those published in the other tables in the same volume. The return of infirmities at the Indian Census has probably never been satisfactory. Notwithstanding instructions to the contrary, it seems likely that many feeble-minded and dotards are entered as insane and that many who are partially blind are returned as totally blind. It is probable of course, that the excess numbers so obtained do not even balance the omissions in the return of the infirmities at all where these infirmities none-the-less exist. In the case of leprosy, however, it is practically certain that the census figures fail entirely to represent the true state of affairs. Dr. Muir and others, who have investigated the prevalence of leprosy by means of local surveys, have concluded that the census figures represent one tenth of the actual. The attempt to record physical disabilities through the medium of the census was abandoned in England and Wales thirty years ago as a failure, and earlier still in the United States of America. It was nevertheless decided not to abandon the attempt to return this disease at the census, as the figures which the census is able to provide afford some basis for an estimate of true numbers in the light of the difference between the figures obtained from local surveys and the census returns for the same areas, and in the absence of any such surveys, they afford a firm ground to stand upon while preparing constructive schemes for the amelioration of such diseases.

Defect of the returns.

3. One obvious criticism on the return of infirmities is that while the first three mentioned are defects which may be observed by an enumerator, the fourth is a disease which can only be detected by expert eyes and should not be made the subject of a purely lay return. Those cases which are obvious to the lay eye are burnt out cases no longer infectious. The infectious cases are those at an earlier stage of development and it is by a comparison of the number of these early cases with the number of those in which the disease has run its course that the increase or decrease of prevalence can be ascertained. Enumerators cannot be expected to add Medical diagnosis to their limited ability to record fact. Apart from this, it is quite obvious that there will be much wilful concealment of such a disease as leprosy, and since the number of females returned as lepers is 436 against 957 males, it may perhaps be inferred that concealment among females is greater; as indeed might be expected in view of customs such as that of purdah. On the other hand it seems to be generally held that leprosy attacks a greater proportion of males than of females, so that it is impossible to say in what degree the lower figures for females are due to the natural incidence of the disease and in what degree to the circumstances of enumeration, and the concealment inevitable from it. Similarly insanity is likely to be concealed particularly in case of females, while there is certain to be a tendency to conceal cases of deaf-mute children. Moreover, the use of such a term as insanity is frequently a matter of personal temperament and of the very variable value that different individuals attach to

identical words. The term 'blind' is liable to a not dissimilar diversity of interpretation and although the instructions are that only those blind in both eyes shall be recorded as such, this is definitely effective only to the extent of excluding from the record persons with one unquestionably sound eye. It is true of course that the bias of one enumerator is apt to be corrected by the bias of another in the opposite direction, and possible that exaggeration and meiosis so balance one another in the returns that a fairly correct conclusion is reached, but none-the-less it is impossible to doctor the returns of infirmity like the admittedly inaccurate returns of age, so as to produce out of amalgamated inaccuracies results which are a sufficiently accurate representation of the facts. Moreover, some of the inexplicable fluctuations from the census to census and inconsistencies that appear between Natural Divisions, make the accuracy of the figures even of blindness open to impeachment. On the other hand it cannot be denied that the ratios of the infirm to the rest of the population at successive ages do show a consistency from census to census which is incompatible with any kind of error but a constant one, indicating that however inaccurate our figures may be numerically they have some real comparative value from census to census. The census figures of infirmity are therefore presented subject to the proviso that although they do indicate tendencies on general lines, their value is only comparative, as they cannot be taken to represent actual numbers. Their treatment is therefore primarily confined to this comparative aspect whether in time or in place, and in view of the nature of the material is perhaps justifiably brief.

Blindness.

4. The figures of blindness have generally been held to be much the most accurate of the infirmity returns on the ground that there is no particular motive for concealment as this affliction excites neither contempt nor disgust; even so the returns are in some cases open to doubt and in any case concealment is likely in the case of girls of marriageable age. In Ajmer-Merwara the incidence in 1921 was heavier on males than on females. This has been reversed in 1931 and in 1951. Figures of blindness are on the whole expected to be heavier in the drier, dustier and sandier parts. But contrary to it we find that Jaisalmer, which is nearly all sand, has a low ratio of blindness while the highest is returned from two such geographical extremes as Bharatpur and Sirohi. Blindness is not marked by a high ratio in the hot and dry district in the west of the State where it might be expected to prevail. Cataract and glaucoma are causes of much blindness which only appear with increasing age, but glaucoma heads the Public Health Commissioner's list (1929) of the main causes of blindness in India, Opthalmia Neonatorum, Small-pox, Conjunctivitis, and Trachoma following in that order, after which are put 'neglect of simple disease of the eye in child-hood' and 'dust and glare especially in the dry zone'. To these are added 'eye-strain under bad lighting conditions and the medicaments of quacks'.

5. A Blind Relief Association, now known as the All-India Blind Relief Association, was founded in Bombay in 1919, and is now affiliated to the International Association for the prevention of Blindness. It aims in particular at conveying relief and prevention into rural areas in different parts of India where treatment is generally inaccessible. Much of the blindness in India is curable and more is preventible. One serious difficulty is the economic one. Cultivators suffering from eye-complaints cannot afford to leave the work on their fields for a prolonged stay in hospital either for themselves or to look after their children there. Consequently proper treatment is only obtained, if at all, too late to be of value, while affections of the eyes are often made worse by the improper treatment of local quacks No apology is needed for quoting, and at length, the Census Superintendent of Madras:—(1931)

"The chief tragedy of blindness is that so much of it in India (probably more than half) is preventable and that the majority of incurably or partially blind become so when infants or young children. We are apt to dwell too much on cataract and the more spectacular manifestations of blindness and forget the large share which parental folly and neglect, improper food and housing play in producing the 50,000 blind recorded in this Presidency. Blindness from cataract despite the large number of cases is of less real importance in the life of the

mmunity, is generally associated with advanced years and is curable. Even if no cure is fected the victim has had during the useful stages of his life the power of sight. Opthalmia eonatorum, Syphilis, Small-pox, Keratomalacia on the other hand, as causes of blindness l mark their victims before adult years are reached and the loss and burden they bring on ie community are difficult to assess. In the first two the fault of the parents is complete. ; is their disease which appears as blindness in their child and if all parents established ieir own soundness before begetting children, blindness of this sort would vanish. Opthalmia eonatorum is in any case preventable after birth by a simple precaution which every woman ught to know but which many, including 'dais', unfortunately do not. Indeed it has frequently een discovered that a fully qualified doctor or midwife had been present at the birth of a hild subsequently produced for treatment of this affliction. Blindness from small-pox is imply neglected vaccination and parental responsibility runs high. It is higher still when we onsider the blindness caused by violent irritants put into the eyes to rouse the child or ure some simple ailment. Chewed red pepper, tobacco juice, red-hot coals, strong solution of alum, all seem preposterous to Western ears, but all are frequently put into the eyes of Indian children with generally the tragic result of blindness. The application of irritants is probably at least as great a cause of blindness in India as Opthalmia Neonatorum. Misfortune comes to all, but there is something peculiarly tragic, about misfortune occasioned by another's folly".

Leprosy.

6. Were it not for their inaccuracy the figures of leprosy would be the most important of the returns of infirmity made at the census. It is however, an unsuitable subject for diagnosis by enumerators and it is also one in which concealment is likely to be particularly obstinate. This is reflected in all probability in the great excess returned of male over female lepers, for though it is stated by some authorities that the male is more exposed to this disease, and though it is clear that this is true in the sense that he is the more likely to contract it away from home, it seems equally probable that the male, who so contracts it, is on the whole a more likely source of contagion to the women of the household he lives in, than the exterior source from which he obtained it was for him. The difference in the incidence of this disease on the two sexes is therefore to be regarded as most suspicious in itself, and the more so in that concealment in the case of women is so easy under the purdah system as to be almost certain inprobably the majority of cases of female lepers. The same factor must be taken into account in regard to the expert surveys of leprosy, for here too the tendency must be for more females than males to escape observation.

Utility of the return.

7. A reference to this point has been made in the Rajputana Agency Census Report 1931 by Lieut. Colonel B. L. Cole I. A. in the following terms "It has long been recognized that the collection of this information is one of the most unsatisfactory and inaccurate features of every Indian Census. Not only is concealment easy, but to the untrained enumerator it is impossible to define the stage at which the feeble-minded come into the category of the insane, or to distinguish leprosy from the diseases which superficially resemble it. There is a reasonable chance however, that errors at each Census are to some extent constant, and therefore the statistics of distribution and variation are of some comparative interest".

Reference to Statistics.

8. The Statistics of Infirmities are embodied in Local Table "Ka" given in Part II-A of the Report which shows the number of persons afflicted by each infirmity by age groups for the States of Rajasthan and Ajmer as well as the Natural Divisions and the Districts therein with rural and urban break-up and sex details.

The Subsidiary Tables 8·1 to 8·3 given in Part I-B of the report show—

(1) Distribution of the infirm by age per 10,000 of each sex for the last four Censuses.

11. It is interesting to note that in Rajasthan in the decade 1921-31 the population grew only by 14 per cent but the number of persons afflicted by each infirmity increased at a faster rate, the rate being much faster in the case of insanity and blindness when compared with the remaining two infirmities. In the period 1931-51 the population grew by 35·7 per cent while the blindness increased by only 10 per cent. This indicated the success of Cataract operations. Increase in insanity was slower than in the previous decade but it was faster in the case of deaf-mutism and leprosy. In Ajmer during the period 1911-21 notwithstanding decrease of population, there has been a rise in deaf-mutism and leprosy, but in the following decades 1931-51 blindness shows a marked decline. Increase in insanity and deaf-mutism was also slower than the increase in population. But there is an amazing increase in leprosy. The high percentage increase in the case of certain infirmities such as deaf-mutism and leprosy should not horrify us, because the initial figure being very small even such a high percentage increase does not mean a very high increase in actual number.

The reasons assigned in the Census Report of Rajputana and Ajmer Merwara in 1921 apply to some extent for this census also *viz.*, "A very large proportion of the persons, suffering from these infirmities, depend for maintenance upon charity and threfore assemble in large numbers at sacred places, where benevolence is freely shown. Ajmer contains the Dargah of Khwaja Sahib, which is an object of pilgrimage for Musalmans and attracts people from all parts of the country, all the year round. but particularly at the Fair called the Urs Mela. This accounts largely for the in crease in the number of deaf-mutes and lepers.". Pushkar another important religious place of Hindus may also be responsible to some extent.

12. The proportion borne by the persons suffering from each infirmity to the total afflicted, is an interesting study and is presented in the following table:

TABLE No. A 34.

Number per 100 afflicted (all infirmities) who are suffering from each infirmity.

State	Number per 100 afflicted who are			
	Blind	Deaf-mutes	Insane	Lepers
Rajasthan	73·0	14·0	10·0	3·0
Ajmer	70·0	16·0	9·0	5·0

This table shows that if 100 persons may be supposed to be afflicted, the number afflicted by each infirmity in Rajasthan in the case of the blind is 73, of deaf-mutes it is 14, of the insane it is 10 and of lepers 3 only. In Ajmer State their number would be 70 blind, 16 deaf-mutes, 9 insane and 5 lepers. Blindness thus appears to be more prevalent than the remaining three infirmities taken together, both in Rajasthan and in Ajmer.

TABLE No. A—35.

No. of females afflicted per 100 males.

State	Females afflicted per 100 males.			
	Insane	Deaf-mutes	Blind	Lepers
Rajasthan	56	60	99	44
Ajmer	73	63	117	62

13. This table No. A 35 shows the proportionate number of females to 100 males supposed to be afflicted with each of the infirmities enumerated. The figures show how blindness affects males and females almost equally while in the case of other infirmities there seems to be definite bias against females It cannot, however, be asserted with any amount of certainty how far the sex differentiation in the incidence of particular infirmities is due to voluntary or involuntary concealment and how much to the peculiar characteristic of the infirmity itself.

27 persons per lac suffering from it stands last. With respect to the incidence in urban areas, the difference from division to division is more marked than in the rural areas, although it is highest in Rajasthan Hills Division where 71 persons per lac of the total urban population are so afflicted. Rajasthan Plateau Division with 49 per lac stands next, followed by East Rajasthan Plain Division with 34 per lac of the total urban population and Rajasthan Dry Area Division with 29 persons per lac suffering from this infirmity stands last.

18. The number of persons afflicted by this infirmity is proportionally greater in urban areas than in the rural areas in Rajasthan. The same is the position in Ajmer. The variation in the rural urban distribution of this infirmity from division to division is worth nothing. In Rajasthan Hills Division the rural urban ratio is the highest being 1:2, next comes Rajasthan Plateau Division where the ratio is 3:5, followed by East Rajasthan Plain Division where it is 3:4. Rajasthan Dry Area Division stands last with the ratio of 5:4. In Ajmer the ratio is 7:10.

19. The highest number of insane males is found in the Rajasthan Hills Division where they form 45 per lac of the rural population followed by Rajasthan Plateau Division (39) Rajasthan Dry Area Division comes next with 37 males per lac and East Rajasthan Plain Division with 31 males, stands last. Insane females in the rural area are proportionately larger in Rajasthan Dry Area Division where 32 per lac of the total rural women are insane. The figures are a little lower in Rajasthan Hills Division (27 per lac) and in the East Rajasthan Plain and Rajasthan Plateau Divisions the proportion is as low as 22 per lac each.

20. In the urban areas in Natural Divisions amongst males the highest number (93 per lac) is again seen in Rajasthan Hills Division. Rajasthan Plateau Division follows with 64. The number in East Rajasthan Plain and Dry Area Divisions per lac is 12 and 40 respectively. Amongst females the number is highest in the Rajasthan Hills Division (49 per lac), Rajasthan Plateau Division with 32 per lac comes next. East Rajasthan Plain Division with 25 per lac stands third and Rajasthan Dry Area Division with 18 per lac only, stands last.

21. The number of persons afflicted by this infirmity per ten thousand of the total population sex-wise is given in the inset table. The male insanity is highest, in Rajasthan Hills Division, (9 persons per ten thousand of the total population) followed by Rajasthan Plateau and Dry Area Divisions (4 persons). East Rajasthan Plain Division stands last. (3 persons). Similarly amongst females also the highest proprotion is seen in Rajasthan Hills Division 5, per ten thousand and in the remaining Divisions the corresponding number is 2 in each.

TABLE No. A-38.

Number of insane persons per 10,000 of the total population

State & Natural Division	Insane per 10,000	
	Males	Females
1	2	3
Rajasthan State ..	4	3
East Rajasthan Plain Division	3	2
Rajasthan Dry Area Division	4	2
Rajasthan Hills Division	9	5
Rajasthan Plateau Division	4	2
Ajmer State	4	3

22. This infirmity affects males more than females the ratio being 4:3 in both Rajasthan and Ajmer States. The difference is not much between the individual Natural Divisions, it varies from 3:2 in East Rajasthan Plain Division to 2:1 in all other Divisions.

Territorial distribution.

30. The following table No. A—40 gives the number of persons afflicted by this disease per lac of total population in each Natural Division separately for rural and urban areas.

TABLE No. A–40.

Territorial distribution of deaf-mutes per lac of the total population.

State and Natural Division	Number of deaf-mutes per lac of population					
	Rural			Urban		
	P.	M.	F.	P.	M.	F.
1	2	3	4	5	6	7
Rajasthan State	44	53	34	53	62	43
East Rajasthan Plain Division ..	54	62	44	65	75	53
Rajasthan Dry Area Division ..	33	42	23	35	39	30
Rajasthan Hills Division	38	43	34	49	52	44
Rajasthan Plateau Division	42	56	27	66	87	42
Ajmer State	64	70	58	90	112	63

31. The incidence of deaf-mutism in rural areas is highest in East Rajasthan Plain Division (54 per lac of the total population) followed by Rajasthan Plateau and Rajasthan Hills Divisions where the figures are 42 and 38 respectively per lac. Rajasthan Dry Area Division stands last (33 per lac). With respect to the incidence in Urban areas the picture is different. It is highest in Rajasthan Plateau Division (66 per lac) followed by East Rajasthan Plain Division (65 per lac). Rajasthan Hills Division stands next where the figure is 49 per lac and Rajasthan Dry Area Division stands last (35 per lac). In Ajmer the figures are higher than every Natural Division of Rajasthan.

32. The number of persons afflicted by this infirmity is proportionately greater in urban areas than in the rural areas in Rajasthan. The variation in from Division to Division is worth noting. In Rajasthan Plateau Division the rural urban ratio is 7: 11, in the Rajasthan Hills Division it is 4:5, in the East Rajasthan Plain Division it is 5: 6 and in the Rajasthan Dry Area Division it is almost 1:1.

33. The proportion of Male deaf-mutes in the rural area is the highest in East Rajasthan Plain Division (62 per lac) followed by Rajasthan Plateau Division (56). Next comes Rajasthan Hills Division with 43 and in Rajasthan Dry Area Division the proportion is the least being 42 per lac. In the case of females in East Rajasthan Plain Division the number is the highest i. e., 44 per lac of the rural female population. Rajasthan Hills Division comes least with 34, followed by Rajasthan Plateau Division with 27 and Rajasthan Dry Area Division stands last with 23 only.

Sex ratio in the incidence of Deaf-mutism.

39. The females ratio among the deaf-mutes of all ages in Rajasthan State is 601 females per 1000 males in 1951. It was 649 in 1931. The age group with the highest female ratio in 1951 is 55 and over, in which 700 females per 1000 male are deaf-mutes, and that with the lowest ratio is the age group 15–24 both in 1951 and 1931, the proportion being 424 females per 1000 males. The female ratio among deaf-mutes of all ages in Ajmer State in 1951 is 629 while in 1931 it was 571 only. The age group with the highest female ratio in 1951 is 0–4 (950) as in 1931 but that with the lowest is the age group 35–44 (271) in 1951, while in 1931 it was the age group 15–24.

BLINDNESS.

Number afflicted.

40. The total number of blind persons in Rajasthan is 34,890 (Males 17,567 and females 17,323), of whom 28,885 (Males 14,597 and females 14,288) live in Rural areas and 6,005 (Males 2,970, Females 3,035) in Urban areas. In Ajmer the number is 2,297 (Males 1,091 and Females 1,206) of whom 1,662 (Males 804 and Females 858) live in Rural areas and 635 (Males 287 and Females 348) in Urban areas.

TABLE No. A–42.

Variation in the incidence of blindness

State	Blind persons per lac of the population.	
	1951	1931
Rajasthan	230	282
Ajmer	335	386

Variation.

41. On a comparison of the proportionate figures of the blind persons in the previous census as given in inset Table No. A–42 it appears that this infirmity showed a decline from 282 per lac in 1931 to 230 per lac of the total population in 1951. In Ajmer it showed a fall from 386 to 335 per lac of the total population.

Territorial distribution.

42. The following table No. A-43 gives the number of persons afflicted by this disease per lac of total population in each Natural Division, separately for Rural and Urban areas.

TABLE No. A–43.
Territorial distribution of Blind persons.

State and Natural Division.		Number of blind persons per lac of the total population.					
		Rural			Urban.		
		P.	M.	F.	P.	M.	F.
1		2	3	4	5	6	7
Rajasthan State.	..	228	221	236	227	217	237
East Rajasthan Plain Division.	..	227	225	230	246	227	268
Rajasthan Dry Area Division	..	246	240	253	196	194	199
Rajasthan Hills Division.	..	195	174	217	236	253	217
Rajasthan Plateau Division	..	227	220	236	235	215	257
Ajmer State.	..	420	396	445	213	182	248

43. The incidence of blindness in Rural areas is highest in Rajasthan Dry Area Division (246 per lac of the total population) followed by Rajasthan Plateau and East Rajasthan Plain Divisions in each of which the number is 227 per lac of the total population. Rajasthan Hills Division stands last in which there are 195 blind persons per lac of the total population. It is surprising to find the ratio as high as 420 blind persons per lac of the population in Ajmer State. With respect to the incidence in Urban areas the picture is different. It is highest in East Rajasthan Plain Division (246 per lac of the total population) followed by Rajasthan Hills Division (236 . Rajasthan Plateau Division stands next (235) and Rajasthan Dry Area Division stands last where there are 196 blind persons per lac of the total population. The difference between the rural and urban areas can be expected as the effect of hot winds carrying burning sand is less felt in urban than in the rural areas in addition to better medical facilities in the towns as compared to villages.

44. Blind persons are proportionately equal in Urban as well as in Rural areas in Rajasthan. The reverse is the position in Ajmer where the urban rural ratio is 1 : 2. The variation from Division to Division is insignificant. In Rajasthan Hills Division it is 4 : 5, in the East Rajasthan Plain Division it is 9 : 10, in the Rajasthan Plateau Division it is 1 : 1 and in the Rajasthan Dry Area Division it is 5 : 4.

45. The proportion of blind persons among rural males is the highest in Rajasthan Dry Area Division *i. e.*, (240 per lac) followed by East Rajasthan Plain Division (225). Next comes Rajasthan Plateau Division with 220 and in Rajasthan Hills Division the proportion is the least *i. e.*, 174 per lac. In the case of rural females the proportion is the highest in Rajasthan Dry Area Division *i. e.*, 253 per lac of the rural female population, Rajasthan Plateau Division comes next with 236, followed by East Rajasthan Plain Division with 230, Rajasthan Hills Division stands last with 217 only.

46. Amongst males of the Urban area the highest incidence of this infirmity is found in Rajasthan Hills Division with 253 per lac of the total Urban male population being afflicted by this infirmity. East Rajasthan Plain Division comes next with 227 per lac, followed by Rajasthan Plateau Divisio with 215 per lac. In the Rajasthan Dry Area Division the number is the least *i. e.*, 194 per lac. Amongst females in East Rajasthan Plain Division this number is the highest, being 268 per lac of the total Urban female population, Rajasthan Plateau Division comes second with 257 per lac, followed by Rajasthan Hills Division with 217 per lac and Rajasthan Dry Area Division stands last with 199 per lac.

TABLE No. A–44.

The number of blind persons per 10,000 of the total population sex-wise.

State and Natural Division	Blind per 10,000	
	Males	Females
Rajasthan State ..	22	24
East Rajasthan Plain Division.	23	24
Rajasthan Dry Area Division.	23	24
Rajasthan Hills Division ..	40	44
Rajasthan Plateau Division..	22	24
Ajmer State ..	30	36

47. The number of blind persons per 10,000 of the total population sex-wise is given in the inset table. Male blindness is highest in Rajasthan Hills Division (40 per ten thousand of the total population) followed by Rajasthan Dry Area Division and East Rajasthan Plain Divisions (23 per ten thousand of total population in each). Plateau Division stands last (22 per ten thousand of the total population). Female blindness is also highest in Rajasthan Hills Divisions with 44 per 10,000 of the total female population. In the remaining 3 Divisions it is 24 per 10,000 in each.

48. Blindness shows a little greater inclination towards females than males. The difference from Division to Division is not very high as seen in the table above.

Number afflicted per lac of the population of each age group sex-wise.

49. The incidence of blindness in particular age groups can be seen in Subsidiary Table 8·1 from which it would appear that in Rajasthan amongst males the age groups most liable to this infirmity are 25 upwards and that the proportion increases with the advance of years. In the age group 25-34, 111 persons per lac of the population were afflicted by it. The proportion in the group 35–44 is 146, in the age group 45–54 it is 309 and in the group 55 and over it is as high as 1,442. Amongst females the proportion is th highest in the age group 55 and over *i. e.*, 2,277 per lac of the population, next comes the age group 45-54 in which it is 450 and in 35-44 it is 170. In Ajmer amongst males the proportion in the age group 35–44 in 280. In the group 45-54 it is 456 and in 55 and over it is 2,464. Amongst females it is the highest in the age group 55 and over *i.e.*, 3,152, in the group 45-54 it is 743 and in the age group 35-44 it is 227. In Rajasthan amongst males it is the lowest in age group 0-4 (39) and amongst females in the same group it is 34 per lac of the population. In Ajmer amongst males it is the lowest in age group 5–9 *i. e.*, 95 and amongst females it is the lowest in the age group 0–4 *i. e.*, 61 per lac.

Comparison with the Census of 1931.

50. A comparison of these figures with those of Census 1931, shows that in Rajasthan the age groups mostly affected both amongst males and females in both Censuses were similar. The age group least affected both amongst males and females is also similar in both the censuses *e. g.* the age group 0–4, but in this age group females are less afflicted with this infirmity than males.

51. In Ajmer the picture is different. The least afflicted age group amongst males in 1951 is 5–9 whereas in 1931 Census it was 0–4, but amongst females in both the censuses the least afflicted age group is 0-4. Another noticeable difference is that the proportion of blind males to females is smaller in the earlier age groups, but this proportion increases in the later age group *i. e.*, in earlier age groups females are less afflicted than males but in later age groups females preponderate among the blind persons.

Sex ratio among blind persons.

52. The female ratio among blind persons of all ages in Rajasthan State in 1951 is 986 while it was as high as 1,295 in 1931, indicating a success of Cataract operations. The age group with the highest ratio in 1951 is 45-54 in which as many as 1,209 females per lac are blind and the lowest proportion is in the age group 10–14 (156). In 1931 the highest number was in the age group 35–44 (1,464) but the age group with the lowest number was the same as in 1951 Census. The female ratio among blind persons of all ages in Ajmer State in 1951 is 1,170 while in 1931 it was 1,233. The age group with the highest female ratio in 1951 is 45–54 (1,325) and that with the lowest is the age group 0–4 (547). In 1931 the highest number was in the age group 55 and over and the lowest in the age group, 5–9.

LEPROSY.

Number afflicted.

53. The total number of persons afflicted by leprosy is in Rajasthan 1,233 (Males 858 and females 375), of whom 974 (Males 669 and Females 305) live in Rural areas and 259 (Males 189 and Females 70), in Urban areas. In Ajmer the number is 160 (Males 99 and Females 61), of whom 113 (Males 62 and Females 51) live in Rural areas and 47 (Males 37 and Females 10) in Urban areas.

TABLE No. A-45.

Variation in the incidence of leprosy.

State	Lepers per lac of the population	
	1951	1931
Rajasthan ..	8	5
Ajmer ..	23	3

Variation.

54. On a comparison of the proportionate figures of the persons afflicted by this disease at the previous censuses as given in inset Table No. A-45. it appears that this infirmity showed an increase in the two decades 1931 to 1951 from 5 to 8 per lac of the total population. In Ajmer it has risen considerably during the same period from 3 to 23 per lac of the total population.

Territorial distribution.

55. The following Table No. A-46 gives the number of persons afflicted by leprosy per lac of total population in each Natural Division, separately for Rural and Urban areas.

TABLE No. A-46.

Territorial distribution of persons afflicted by leprosy.

State and Natural Division	Number of lepers per lac of the total population					
	Rural			Urban		
	Persons	Males	Females	Persons	Males	Females
Rajasthan State	8	10	5	10	14	6
East Rajasthan Plain Division ..	12	15	8	10	13	7
Rajasthan Dry Area Division ..	5	6	3	4	4	3
Rajasthan Hills Division ..	4	5	2	3	6	3
Rajasthan Plateau Division ..	6	8	3	9	10	9
Ajmer State	28	31	26	16	24	7

The incidence of Leprosy both in the Rural as well as in the Urban areas is highest in the East Rajasthan Plain Division where there are 12 lepers per lac of the total rural population and 10 per lac of the urban population followed by the Rajasthan Plateau Division (6 per lac in rural and 9 per lac in urban) and the Rajasthan Dry Area Division (5 per lac in rural and 4 per lac in urban), the Rajasthan Hills Division stands last where 4 per lac of the rural population and 3 per lac of the urban are lepers.

56. Persons afflicted by this infirmity are proportionally greater in urban areas than in the rural areas in Rajasthan, the ratio being 5 : 4. The ratio in Ajmer is reverse *i. e.* 4:7. In the East Rajasthan plain Division the ratio of urban to the rural is 5 : 6, in the Dry Area Division it is 4 : 5, in the Rajasthan Hills Division it is 3 : 4. Rajasthan Plateau Division differs from other three Divisions. In this Division the ratio of urban to rural is 3 : 2.

57. In the rural areas both among males as well as females the number of lepers per lac of the population is the highest in the East Rajasthan Plain Division (males 15 and females 8) followed by the Rajasthan Plateau Division (males 8 and females 3). Next comes the

Rajasthan Dry Area Division with 6 males and 3 females and in the Rajasthan Hills Division the number is the least *i. e.*, 5 males and 2 females.

58. In the urban areas amongst males the highest incidence of this infirmity is in the East Rajasthan Plain Division where there are 13 lepers per lac of the total urban male population. The Rajasthan Plateau Division comes next with 10 per lac followed by the Rajasthan Hills Division with 6 per lac. In the Rajasthan Dry Area Division the number is the least *i. e.*, 4 per lac. Amongst females in the Rajasthan Plateau Division this number is the highest being 9 per lac of the total urban females population. The East Rajasthan Plain Division with 7 comes next, followed by the Rajasthan Dry Area and the Hills Divisions with 3 per lac each.

59. The number of persons per 10,000 of the total population sex-wise afflicted by leprosy in the Rajasthan and Ajmer States and in the Natural Divisions is given in the inset Table No. A–47. The male leprosy is highest in the Rajasthan Hills Division (2 males per ten thousand of the total male population) followed by the East Rajasthan Plain Division (1 male per ten thousand of the male population), the Rajasthan Plateau Division stands next (0·8 per ten thousand) and the Rajasthan Dry Area Division stands last (0·6 per ten thousand). The female leprosy is the highest in the East Rajasthan Plain Division *i. e.*, 0·8 per 10,000 of the total female population, followed by the Rajasthan Hills Division 0·6 per 10,000. The Rajasthan Plateau Division comes next with 0·4 per 10,000. The Rajasthan Dry Area Division stands last with 0·3 per 10,000.

TABLE No. A–47.

The number of lepers per 10,000 of the total population sex-wise.

State and Natural Division	Lepers per 10,000 Males	Lepers per 10,000 Females
Rajasthan State	2	0·5
East Rajasthan Plain Division.	1	0·8
Rajasthan Dry Area Division.	0·6	0·3
Rajasthan Hills Division ..	2	0·6
Rajasthan Plateau Division..	0·8	0·4
Ajmer State	3	2

60. This infirmity affects males more than females, the ratio being 4:1 in the Rajasthan State as a whole and it is 3:2 in Ajmer. It is 5:4 in the East Rajasthan Plain Division. In the Rajasthan Dry Area Division and the Rajasthan Plateau Division it is 2:1 in each. It is 3:1 in the Rajasthan Hills Division. This may perhaps to some extent be due to the concealment of the disease among females.

Number of lepers per lac of each age group sex-wise.

61. The effect of this infirmity in particular age groups can be seen in the Subsidiary Table No. 8·1 from which it would appear that in the Rajasthan State amongst males the age groups most liable to this infirmity are 25 upwards and that the proportion increases with the advance of years. In the age group 25 34 there are 11 lepers per lac of the population. In the group 35–44 their number is 15, in the group 45–54 it is 19 and in the group 55 and over it is 41. Amongst females also the proportion is the highest in the age group 55 and over *i.e.*, 24 per lac, next come the age groups 35–44 and 45–54 in which the number is 8 each. In Ajmer also amongst males the pattern in the same. The proportion in the age group 35–44 is 47. In the group 45–54 it is 58 and is the group 55 and over it is 265. Amongst females also it is the highest in the age group 55 and over *i.e.*, 125, but in the age group 45–54 it is only 19 while in the age group 35–44 it is 39. In Rajasthan, amongst males, it is the lowest in the age group 0–4 (2) and amongst females in the same group it is 1 per lac. In Ajmer amongst males it is the lowest in the age group 10–14 (5) and amongst females in the age group 0–4 (2 per lac).

Comparison with the Census of 1931.

62. A comparison of these figures with those of the Census of 1931, shows that in Rajasthan both amongst males as well as females the age group mostly afflicted with leprosy in 1951 is 55 and over but in 1931 it was 35–44. The lowest figures both amongst males and females are found in both the censuses in the age group 0–4. In Ajmer there is a slight difference for males *i. e.*, the least afflicted age group in 1951 is 10–14 whereas in the Census 1931 it was 0–9. For females there is no difference in both censuses.

Number of females afflicted per 1,000 males.

63. The number of females afflicted by leprosy per thousand males of all ages in Rajasthan in 1951 is 437. In 1931 it was 421 only. The age group with the highest number of females per thousand males in 1951 is 5–9 *i. e.*, 821 and that with the lowest is the age group 55 and over (391). In 1931 the highest number was in the age group 15–24 and the lowest in the same age group as in 1951 Census.

64. The number of female lepers per thousand males of all ages in Ajmer State, in 1951 is 616. In 1931 it was 500 only. The age group with the highest number of females per thousand males in 1951 is 10–14 (1,000) and that with the lowest is the age group 45–54 (267) whereas in 1931 the age group 10–14 was the lowest, in the sense, that there were no leper females in this age group, hence really the lowest age group with the figure of 250 female lepers per thousand males is 35–44.

APPENDIX IV

DISPLACED PERSONS

Displaced Persons.

Introductory.

There is hardly a parallel in the history of this country showing such mass displacement of persons in such tragic circumstances. In Rajasthan and Ajmer, no communal disturbances of serious nature took place as they did in 'Pakistan' nor any such incidents worth mentioning ever happened to which the migration of the Muslims from these States can be attributed. The communal situation in Pakistan resulted in the mass migration of Hindus which took place on an unprecedented scale in 1947, 1948 and 1949. In the whole of Rajasthan and Ajmer States, the vast majority of displaced persons came from Sind, Punjab, and North-West Frontier Province who were rehabilitated in various parts of the States, especially in Rajasthan Dry Area Division (Gang Canal area in Ganganagar District) where they constitute nearly 50 per cent of the total displaced persons settled in Rajasthan.

Influx of displaced persons from Pakistan into the State of Rajasthan.

2. This influx started in Jaipur Division from the month of August 1947 and continued till the middle of year 1949. The same was the case in Jodhpur Division starting immediately after 14th August, 1947 and lasting for several months. In Bikaner Division it began in September, 1947 and continued till November. In Kotah Division it started in December, 1947 and continued till the middle of 1949. In Udaipur Division it commenced in the latter part of 1947 and continued unabated till October, 1949. In Ajmer State the influx started towards the end of October 1947 and stopped towards the end of March, 1948.

3. Main table D–V(i) given in Part II–A of the Report shows for each Division and District the number of persons who entered India in various years, from which it appears that the influx started in 1947 with full force and continued to some extent till 1951.

TABLE No. A–48.

Displaced persons, Registered and enumerated

State and Administrative Division.	Number registered	Census 1951 Enumeration figures
1	2	3
Rajasthan State	—	297,016
Jaipur Division.	15,000 families or 75,000 persons	131,836
Jodhpur Division	9,865 families or 46,365 persons	27,846
Kotah Division	3,651 families or 16,219 persons	17,212
Udaipur Division	4,341 families or 18,891 persons	13,739
Bikaner Division	Not available	106,385
Ajmer State.	21,509 families or 110,053 persons	71,351

Registration.

4. There was a system of registration, both in Rajasthan and Ajmer States. In all Divisions a regular enumeration commenced from September, 1948 with the establishment of the office of Director of Rehabilitation at Jaipur and at Udaipur in September, 1948, at Bikaner and Kotah in the last quarter of 1948, at Jodhpur in June 1949 and in Ajmer State in January 1948. The inset Table No. A–48 compares the number of displaced persons with the number enumerated in the Census of 1951. It appears that several persons had left by the time of Census of 1951 after registration. The last date fixed for Registration was 30th April, 1951.

5. In connection with Census 1951, there was a question specially meant for displaced persons *viz.*, if a displaced person, state the date of coming into India and place of residence is Pakistan. The material collected in response to the question has been tabulated in the following tables.

Reference to Tables.

(1) Economic Tables I, II and III.

(2) Age tables (Three tables)

C- II Livelihood Classes by age groups.
C- III Civil condition by age.
C- IV Literacy by age.

(3) Social and Cultural tables.

D- I Language (i) Mother tongue, (ii) Bilingualism.
D- II Religion.
D-III Scheduled Castes and Scheduled Tribes.
D-IV Migrants.
D-V Displaced persons by districts of origin, and date of arrival in India

(i) Displaced persons by year of arrival.
(ii) Displaced persons by livelihood classes.

D-VI Educational Standards.

These tables are going to be published in an All India Brochure on Displaced Persons.

Distribution of Displaced Persons.

(*a*) *In districts*—6. The total population of displaced persons enumerated in Rajasthan is 297,016 of whom 156,942 are males and 140,074 females. Of these 157,925 or 53·17 per cent reside in urban units and 139,091 or 46·83 per cent reside in rural areas. The largest number reside in the District of Ganganagar (Bikaner Division) 33·5 per cent, followed by 19·1 per cent in Alwar and 14 per cent in Jaipur Districts (Jaipur Division) and the least in Dungarpur District (Udaipur Division) that is 50 persons or 0·016 per cent.

7. The total population of displaced persons enumerated in Ajmer State is 71,351 of whom 36,879 are males and 34,472 females. Of these 1204 or 1·68 per cent live in rural areas and 70,147 or 98·32 per cent in urban units.

8. Among displaced persons those who were Agriculturists have concentrated themselves in the Districts of Ganganagar (83 per cent), Alwar (83 per cent) and Bharatpur (65 per cent). In these districts the urban population of displaced persons is comparatively small being 17 per cent in Ganganagar, and Alwar each and 35 per cent in Bharatpur. The urban population of displaced persons have found it convenient to settle in Jaipur District where they form 92 per cent. The percentage of rural displaced persons in the same district being 8 per cent.

9. Considering the circumstances under which the mass movement of population on an unprecedented scale has taken place between the two Dominions of Pakistan and India, this is as could have been expected. In Ganganagar large areas in the recently established Gang Canal Colony were available for cultivation, of which the immigrants readily availed themselves and in Alwar and Bharatpur, as reported by the district authorities, Meos and other Muslim agriculturists had emigrated to Pakistan in hot haste leaving their lands and homes, which were

ready to be occupied by the immigrant population. On the contrary because of the integration of the covenanting States into Rajasthan, with the city of Jaipur as its capital, schemes for the expansion of the city were already in hand, the immigrants readily fitted themselves and displaced persons who were either business men or artisans or other professionals could find work there to earn their livelihood and peacefully settled in the city of Jaipur, the displaced persons population there alone being 30,678 out of 37,468, that is 81·8 per cent of those settled in Jaipur District.

10. The same is the case with the State of Ajmer, the displaced persons residing there number 70,147 in urban areas and 1,204 in the rural. The city of Ajmer and the towns absorb 98·3 per cent of their total population. Other details can be seen in Table D–V (i) and D–V (ii) given in Part II–A of the Report.

(*b*) *In Cities*—11. The inset Table No. A-49 gives the number of displaced persons enumerated in each city.

TABLE No. A–49.

Distribution of displaced persons in cities.

City.		Persons.	Males.	Females.
Ajmer	..	57,628	29,676	27,952
Jaipur	..	30,678	16,134	14,544
Jodhpur	..	15,162	7,897	1,265
Kotah	..	10,898	5,651	5,247
Alwar	..	6,792	3,641	3,151
Udaipur	..	6,482	3,339	3,143
Bikaner	..	4,605	2,418	2,187

It shows that a majority of displaced persons of Ajmer State are settled in Ajmer City alone. Among the cities of Rajasthan, the highest number settled in Jaipur, next to it in Jodhpur. Bikaner stands last in this respect, although it ranks third among the cities of Rajasthan. Kotah has attracted a fair number of displaced persons though it stands last but one among the cities of Rajasthan.

TABLE No. A–50.

Migrants from Pakistan during the period 1946–51 in Rajasthan & Ajmer.

Year	Rajasthan		Ajmer	
	Migrants from East Pakistan	Migrants from West Pakistan	Migrants from East Pakistan	Migrants from West Pakistan.
1	2	3	4	5
1946	16	5,990	..	41
1947	721	223,014	1,860	51,808
1948	174	58,166	193	16,737
1949	4	7,399	..	688
1950	5	1,518	..	19
1951	..	9	..	5
Total .	920	296,096	2,053	69,298

12. The figures of migration from East and West Pakistan in each year can be seen in the inset Table No. A–50.

Period of migration.

13. It will be seen that migration from East Pakistan in both the States of Rajasthan and Ajmer was negligible in the year 1946; it reached its climax in 1947 and practically ceased in the year 1949. Only 920 displaced persons from East Pakistan were enumerated in Rajasthan and 2,053 in Ajmer. This state of affairs can be readily accounted for by the large distance between the two countries, and the fact that immigrants got settled in the intervening States that suited them the most in every way, geographically and economically. Only those persons who had their relatives settled in Rajasthan before partition came down to these distant places as being convenient to them.

14. As regards West Pakistan figures, the table shows that migration began in 1946 and a fair number entered India in that year. It will not be out of place to mention here that these persons do not really come within the definition of Displaced Persons and have been entered as such due to the misunderstanding of the enumerator, but he is not to blame. Immigrants' insistence for such an entry is also responsible for it, because such persons in many cases thought it to be in their interest to get themselves entered as displaced persons, although they came before the disturbances began, because they were unable to return to their homes.

15. The largest number 223,014 in Rajasthan and 51,808 in Ajmer entered in 1947. Only next year the figures came down to 58,166 for Rajasthan and 16,737 for Ajmer. The number gradually decreasing, in 1951 it came to only 9 and 5 for Rajasthan and Ajmer respectively. The reason for such a great number of displaced persons from West Pakistan coming to Rajasthan is not far to seek. Rajasthan is in the immediate neighbourhood of its greater part, with a frontier extending over a length of about 1,500 miles or more. Immediately after partition there was a regular flow of immigrants and 223,014 displaced persons got settled in Rajasthan, and 51,808 in Ajmer which figures work out at 75 and 73 per cent respectively of the total population of immigrants from West Pakistan. The mass movement continued with almost the same velocity in the year 1948 when 58,166 persons settled in Rajasthan and 16,737 in Ajmer; that is, 20 and 23 per cent of the total. This movement gradually slowed down in the following 2 years 1949 and 1950, till it became almost nil in 1951, when only 9 and 5 persons are recorded for Rajasthan and Ajmer respectively.

16. Districtwise analysis of Census Data given in Table D-V(i) in Part II-A of the Report shows that the only note-worthy migration from East Pakistan was to Bharatpur and Ajmer in the year 1947 when 285 and 1860 persons came to these States in Rajasthan and Ajmer respectively. From West Pakistan the influx commenced in 1946 when 4,867 persons migrated to Jaipur District, it reached its climax in 1947 and the following are the remarkable migration figures for some districts. Similar figures for 1948 are also noted for comparison's sake:—

TABLE No. A-51.

Migration from West Pakistan in certain Districts

District	Number of migrants in 1947.	Percentage of total displaced persons.	Number of migrants in 1948.	Percentage of total displaced persons.
	2	3	4	5
Ajmer	51,808	73	16,737	23
Ganganagar	92,859	93	6,013	6
Alwar	40,936	72	14,218	25
Jaipur	22,297	55	12,182	30
Bharatpur	19,122	68	7,227	26
Jodhpur	12,671	79	2,827	18

17. This influx slowed down considerably in the year 1949 when only 2 per cent of the total displaced persons came to Rajasthan and 0·1 per cent in Ajmer. In the year 1950 it was greatly reduced and in 1951 it had practically ceased, the figure being only 14 for both the States.

Means of livelihood.

18. Table D–V(ii) given in Part II–A of the Report shows the Census Data for the population of displaced persons enumerated in the States of Rajasthan and Ajmer on the basis of the means of livelihood pursued by them. Broadly speaking they have been divided into 2 main classes viz., (1) Agricultural class and their dependants and (2) Non-Agricultural class and their dependants. Class(1) Agricultural has been further sub-divided into the following 4 groups:—

1. Cultivators of land wholly or mainly owned.
2. Cultivators of land wholly or mainly unowned.
3. Cultivating labourers.
4. Non-cultivating owners of land, agricultural rent receivers etc.

Class (2) Non-Agricultural class has been sub-divided into the following 4 groups for persons including dependants who derive their principal means of livelihood from:—

1. Production other than cultivation.
2. Commerce.
3. Transport.
4. Other services and miscellaneous sources.

19. In Rajasthan the displaced persons population is almost equally divided between the two main occupational classes–Agricultural and Non-Agricultural. Agriculturists are 145,697 in number who form 49 per cent of the total and the Non-agriculturists are 151,319 who form 51 per cent. The people who settled in Ajmer are mostly Non-agriculturists, their number being 70,567 who form 99 per cent of the total Agriculturists. Non-Agriculturists are only 784 who form 1 per cent only.

20. Analysing this data districtwise as given in Table No. A–52 below it is seen that the highest number of those belonging to agricultural classes has been found in the Districts of Alwar 46,962, Ganganagar 74,429 and Bharatpur 20,251 where they form 83 per cent, 75 per cent and 72 per cent of the total displaced persons settled in these districts. All the remaining districts account for 4,055 persons only. Of those belonging to the Non-Agricultural classes the highest number has been found in Jaipur 40,385 and Jodhpur 15,909; where they form 99 per cent of the total who settled in these districts.

TABLE No. A-52.

Occupational distribution of displaced persons in Districts.

District	No. of displaced persons of Agricultural Classes.	Percentage to total displaced persons in the district.	No. of displaced persons of Non-agricultural classes.	P.C. to total displaced persons in the district.
1	2	3	4	5
Ganganagar ..	74,429	75	25,035	25
Alwar	46,962	83	9,813	17
Bharatpur ..	20,251	72	7,926	28
Jaipur	314	1	40,385	99
Jodhpur	101	1	15,909	99
Kotah	464	3	12,855	97
Udaipur	186	2	7,549	98
Barmer	930	14	5,768	86
Bikaner	82	2	4,930	98
Bhilwara	33	1	3,706	99
Tonk	954	32	1,982	68
Pali	21	1	2,698	99
Bundi	490	19	2,119	81
Churu	4	0	1,903	100
Chittorgarh ..	82	4	1,825	96
Sawaimadhopur ..	93	7	1,263	93
Jhalawar	55	4	1,229	96
Sikar	10	1	1,086	99
Jaisalmer	10	1	1,062	99
Jalore	162	20	667	80
Jhunjhunu ..	15	2	782	98
Banswara	2	1	306	99
Nagaur	9	3	253	97
Sirohi	38	15	218	85
Dungarpur ..	0	0	50	100

21. Further classification of the displaced persons in Rajasthan and Ajmer according

41. Considering the West Pakistan figures year-wise the sex ratio varies from 97 to 79 r cent, it is the highest in 1949 and the lowest in 1946. The figures and percentages year by ar for Rajasthan and Ajmer States are as follows:—

TABLE No. A–57

Year		Rajasthan	Ajmer
1946	Males	3,349	34
	Females	2,641	7
	Percentage	79	21
1947	Males	117,251	25,987
	Females	105,763	25,821
	Percentage	90	99
1948	Males	31,324	9,272
	Females	26,842	7,465
	Percentage	86	81
1949	Males	3,747	445
	Females	3,652	243
	Percentage	97	55
1950	Males	794	9
	Females	724	10
	Percentage	91	111
1951	Males	..	1
	Females	9	4
	Percentage	0	400

42. Sex ratio in each livelihood class can be seen in Table No.A–58

Sex ratio by livelihood classes.

TABLE No. A–58

Sex ratio in Livelihood Classes.

State	Females per 100 males in livelihood classes.							
	Cultivators of land wholly or mainly owned and their dependants	Cultivators of land wholly or mainly unowned and their dependants	Cultivating labourers and their dependants	Non-Cultivating owners of land agricultural rent receivers and their dependants	Production (other than cultivation)	Commerce	Transport	Other Services and miscellaneous sources
	I	II	III	IV	V	VI	VII	VIII
Rajasthan	90	88	87	119	86	89	87	91
Ajmer	225	30	55	93	95	89	77	102

In Rajasthan the sex ratio in each livelihood class is almost uniform except in class IV where females are in excess of males. In Ajmer, the females are more than double the males in class I, less than 1/3rd in class II and nearly half in class III.

APPENDIX V

SCHEDULED CASTES AND SCHEDULED TRIBES

Scheduled Castes and Scheduled Tribes.

Introductory.

When one thinks of Indian society, one thinks first of caste because caste is one of the oldest, most peculiar, and at the same time most fundamental features of this society. Despite the common assertion by Indian intellectuals that caste is dead in India, and despite the constitutional guarantees that this shall be so, we know that it is not dead. It is dying but before it dies completely it will be a long force in Indian life.

2. Articles 341 and 342 of the Constitution of India relate to Scheduled Castes and Scheduled Tribes. They are reproduced below:—

Scheduled Castes.

341. (1) The President may, after consultation with, the Governor or Rajpramukh of a State, by public notification, specify the castes, races or tribes or parts of or groups within castes, races or tribes which shall for the purposes of this Constitution be deemed to be Scheduled Castes in relation to that State.

(2) Parliament may by law include in or exclude from the list of Scheduled Castes specified in a notification issued under clause (I) any caste, race or tribe or part of or group within any caste, race or tribe, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

Scheduled Tribes.

342. (1) The President may, after consultation with the Governor or Rajpramukh of a State, by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes in relation to that State.

(2) Parliament may by law include in or exclude from the list of Scheduled Tribes specified in a notification issued under clause (I) any tribe or tribal community, or part of or group within any tribe or tribal community, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

3. The President has declared as Scheduled Castes for Rajasthan and Ajmer States the castes mentioned in fly-leaf of table D–III given in Part II–A of the Report. Bhils have been declared as Scheduled Tribes in the Ajmer State and Bhils residing in particular areas of Rajasthan as Scheduled Tribes in Rajasthan. These areas are known as Scheduled areas and are also described in the fly-leaf of Table D–III.

4. In the Census of 1951, question No. 2 part (C) was ' Social Division". The enumerator was required to enter the name of caste or class or social division as may be returned by the person enumerated. But if the class or caste returned happened to be any one of those declared as Provisional Non-backward, he was asked to write "0". From the entries in the slips in response to this questions the figures of those castes or classes which have been declared as Scheduled castes or Scheduled tribes were sorted and tabulated and the results are published in Main Table D–III in Part II-A of the Report.

Accuracy of the returns.

5. The instructions were clear enough and there is no reason to doubt the accuracy of the figures tabulated; but the figures are vitiated to some extent; for instance, if a citizen belonging to Chamar caste returned his caste as anything other than Chamar, *e. g.*, Yadav or Raidasia, or if a Bhangi returned himself as Harijan, or a Koli as Koli Rajput, or if a Bhil returned his Gotra

e. g., Damar, Pargi etc., such persons could not be sorted as Scheduled castes or Scheduled tribes because the sorter had to stick to the entry in the slip and as it was different from that given in the list of Scheduled castes and Scheduled tribes supplied to him, he had naturally to ignore such slips while tabulating the figures of Scheduled castes and Scheduled tribes.

6. In this connection the controversy regarding Bhils and Minas is also rather interesting. The tribe declared as Scheduled is that of Bhils but in the southern districts of Udaipur Division a tendency has been noticeable among Bhils to call themselves Minas. The matter was examined by Capt. Webb, Superintendent of Census Operations, Rajputana and Ajmer Merwara in 1941 who has given a detailed note in Appendix "C" to his Census Report "These Ten Years" which is reproduced in Annexure I. As a result of this tendency, only those who returned themselves as Bhils in response to enumeration question have been tabulated under Scheduled tribes. The figures are, therefore, to be used in the light of the above explanation.

Distribution of Scheduled Castes and Scheduled Tribes.

7. Main Table D—III (Scheduled Castes and Scheduled Tribes) given in Part II-A of the Report shows the total Strength of all Scheduled castes taken together as well as of Bhils of Scheduled area in Rajasthan and Ajmer States, and the Natural Divisions and districts, from which it would appear that the Scheduled tribes form 2·07 p. c. to total population in Rajasthan and 1·4 p. c. in Ajmer. The proportionate strength of Scheduled castes is 10·5 p. c. to total population in Rajasthan and 11·7 p. c. in Ajmer.

8. The Rajasthan Plateau and Hills Divisions are the only two divisions which contain Scheduled areas in Rajasthan. There are no Scheduled areas in other divisions of the State. The only districts which contain Scheduled areas are Dungarpur, Banswara in Hills Division and Partabgarh Sub-Division of Chittorgarh District in Plateau Division. All the Bhils of Ajmer State are treated as Scheduled tribe.

Scheduled Castes.

9. The strength of the Scheduled castes is greatest in East Rajasthan Plain Division being 14·2 per cent of the total population and lowest in Rajasthan Hills Division being 5·2 per cent as seen in Table No. A—59 below.

TABLE No. A-59.

Proportionate strength of Scheduled Castes in State and Natural Divisions.

State and Natural Division	Population of Scheduled castes per 1,000 of total population	Distribution of 1,000 persons of Scheduled castes in State and its Natural Divisions.
1	2	3
Rajasthan State	105	1,000
East Rajasthan Plain Division	142	582
Rajasthan Dry Area Division	70	201
Rajasthan Hills Division	52	68
Rajasthan Plateau Division	119	149
Ajmer State..	117	1000

The greatest concentration of Scheduled castes is found in East Rajasthan Plain Division where more than 1/2 of their population is found residing. Next to it they are found in Dry Area Division, which accommodates nearly 1/5 of their total number in Rajasthan.

Scheduled Tribes.

10. There are 316,348 persons enumerated in Rajasthan as belonging to the Scheduled tribes. Out of whom 97·7 p. c. are found in the Hills Division. The remaining 2·3 p. c. are found in the Plateau Division. More than 68 p. c. reside in Banswara District alone having a population of 215,624 persons belonging to Scheduled tribes. Next comes Dungarpur District which accommodates 94,031 persons or 29·7 p. c. of the total population of Scheduled tribes in the State. In Ajmer State there are only 9,816 persons enumerated as belonging to Scheduled tribes.

Distribution of Scheduled Castes and Tribes by Livelihood Classes.

11. The distribution of Scheduled castes and Scheduled Tribes into Agricultural and Non-Agricultural classes in the State and Natural Divisions is given in Table No. A–60 below:—

TABLE No. A–60.

Distribution of Scheduled Castes and Scheduled Tribes by Agricultural and Non-Agricultural classes actual and per 1,000 of their population.

State and Natural Division	Scheduled Castes				Scheduled Tribes			
	Agricultural		Non-Agricultural		Agricultural		Non-Agricultural	
	Actual	Per 1000	Actual	Per 1000	Actual	Per 1000	Actual	Per 1000
1	2	3	4	5	6	7	8	9
Rajasthan State ..	1,148,268	714	460,806	286	314,099	993	2,249	7
East Rajasthan Plain Division	700,008	747	236,422	253	..	..	..	..
Rajasthan Dry Area Dn.	219,028	677	104,396	323	..	..	..	..
Rajasthan Hills Dn. ..	53,269	489	55,609	511	307,676	994	1,979	6
Rajasthan Plateau Dn.	175,963	732	64,379	268	6,423	960	270	40
Ajmer State ..	36,054	445	44,920	555	5,563	567	4,253	433

The figures indicate that in Rajasthan State and all its Natural Divisions (except Rajasthan Hills Division) more than 60% of Scheduled castes population are engaged in agricultural activities. But in Ajmer State, the case is reverse where non-agriculturists preponderate over agriculturists. In Rajasthan Hills Division the ratio roughly equals, because in this Division wood and grass cutting, cattle breeding and stock-raising which are included in Industries are as common occupations of the people as agriculture.

12. In Rajasthan 99 p. c. of the Scheduled tribes are agriculturists. In Ajmer also agriculturists are slightly in excess of non-agriculturists.

13. The distribution of Scheduled castes people who are agriculturists among individual agricultural livelihood classes is shown in Table No. A-61 below:—

Agricultural Classes

TABLE No. A 61.

Distribution of Scheduled Castes population by Agricultural classes in State and its Natural Divisions

State and Natural Division	Agricultural classes			
	Cultivators of land wholly or mainly owned and their dependants	Cultivators of land wholly or mainly unowned and their dependants	Cultivating labourers and their dependants	Non-Cultivating owners of land, agricultural rent receivers and their dependants
	I	II	III	IV
Rajasthan State ..	618,053	403,566	111,696	13,053
East Rajasthan Plain Division	368,197	273,850	49,157	6,804
Rajasthan Dry Area Division	95,438	108,319	14,291	970
Rajasthan Hills Division.	35,837	12,586	3,930	916
Rajasthan Plateau Division	118,531	8,801	44,228	4,353
Ajmer State ..	24,638	5,376	5,060	980

In all the Divisions as well as in the State both in Rajasthan and Ajmer, cultivators of and wholly or mainly owned stand first among four agricultural classes, cultivators of unowned land stand second, cultivating lobourers rank third and non-cultivating owners stand last.

14. Similarly among Scheduled tribes, who are agriculturists, more than 70 p. c. are owner cultivators in Rajasthan. Cultivators of unowned land stand second, cultivating labourers rank third while non-cultivating owners occupy the last position. The same is the trend in Ajmer. For district-wise details and their distribution by Livelihood classes, see Annexure II.

15. The distribution of Scheduled castes people following Non-agricultural pursuits in each individual livelihood class is given in the Table No. A-62 below:—

Non-agricultural Classes.

TABLE No. A-62.

Distribution of Scheduled Castes population by Non-agricultural classes in State and its Natural Divisions.

State and Natural Division	Non-agricultural classes			
	Production (other than cultivation)	Commerce	Transport	Other services and miscellaneous sources
	V	VI	VII	VIII
Rajasthan State ..	196,062	40,049	12,347	213,148
East Rajasthan Plain Division	98,830	16,073	6,408	115,911
Rajasthan Dry Area Division	35,346	14,708	4,006	50,336
Rajasthan Hills Division.	27,487	5,838	1,149	21,135
Rajasthan Plateau Division	34,399	3,430	784	25,766
Ajmer State ..	21,019	4,096	1,242	18,563

In Rajasthan State the largest number of Scheduled castes belong to Service class; Production (other than cultivation) supports the next largest number. Commerce stands third in this respect and Transport last. The same trend is seen in the Rajasthan Plain Division and Rajasthan Dry Area Division. In case of other two Divisions and Ajmer State, Production (other than cultivation) interchanges the position with Service. The same position is observed in these two Divisions and Ajmer State in respect of Commerce and Transport as seen in Table above.

16. The detailed livelihood classification of Scheduled Tribes population following Non-agricultural pursuits is given in Table No. A-63 below.—

Scheduled Tribes

TABLE No. A 63.

Distribution of Non-agricultural Scheduled Tribes population by livelihood classes.

M/L Classes	Scheduled Tribes population	
	Rajasthan	Ajmer
V. Production (other than cultivation) ..	486	2,135
VI. Commerce	49	1,097
VII. Transport	8	439
VIII. Other Services and miscellaneous sources	1,706	582

These figures show that in Rajasthan a great majority of the Scheduled tribes population engaged in Non-agricultural pursuits are engaged in Service etc. and Industry supports the next highest number, because people engaged in charcoal preparation, collecting forest products like Gum and Lac and wood cutting etc. come under this category. Commerce and Transport are very in significant. In Ajmer Industry supports the largest number (stock-raising and cattle breeding). Next comes Commerce which supports those who are sellers of grass, firewood and forest products.

ANNEXURE I.

The Bhils of Rajputana

(By Capt. A.W.T. Webb)

Much has been written about the Bhils from time to time and no attempt will be made here to cover well-trodden ground. In this article two matters only concerning these people will be dealt with—matters which came to light or into prominence during the census of 1941, and may crop up again in the future.

Early in 1940, just after I had taken over charge as Provincial Census Superintendent for Rajputana, the well-known Rajputana historian, Rai Bahadur Gaurishanker Ojha, paid me the honour of a visit. He informed me that, in his opinion, Bhils in past censuses had been wrongly classified. He believed that possibly a few genuine Bhils might be found, but that most of them previously classified as Bhils were, in reality, Minas, and a rectification in classification should now be made.

Information from such a source was not to be treated lightly, and certainly my earliest inquiries seemed to confirm the Rai Bahadur's opinion. During a tour through the States of Mewar, Danta, Partabgarh and Dungarpur and later, of Banswara and Sirohi, the chief strongholds of the Bhils, many of these people were met and asked as to what tribe they belonged to. Here and there a man could be found who admitted he was a Bhil; most of them however, claimed to be Minas. Even on the way to Kherwada, the headquarters of the Mewar Bhil Corps, pensioners and others from that regiment met on the road or visited in neighbouring villages claimed to be Minas. "This being so, why call it the Bhil Corps?"— I asked them but could get no explanation.

Curiously enough it was a Bhil lady who saved me from accepting this evidence as conclusive of Rai Bahadur Ojha's proposition.

Overtaking on the Kherwada road a small party of people, who looked like Bhils, I pulled up to ask them the usual question. They proved exceedingly stupid, and appeared to be unable to follow our questions. Just then a lady arrived. She stepped forward with a smile and said: "These fellows are junglies and know nothing. What is it you want to know? Perhaps I can help you."

"Thank you, Madam. What I want to know is whether these men here are Bhils or Minas."

"They are Bhils."

"And can you explain why nearly every Bhil one meets calls himself a Mina?"

She smiled knowingly. "That's easy to answer", she replied. "Ever since the Bhils have become Government servants (in the Bhil Corps), they've started to give themselves airs, and to call themselves by the name Mina, which they regard as denoting a better caste than Bhil." She paused then and added: "I'm a Bhil myself, and proud of it, but you will realize that it is a bit sickening always to be called 'Salar Bhil.''

"The scent gets stronger", I told my companions and determined to follow up this clue by a visit to the Bhil Corps as soon as possible. Unfortunately, Major Maxwell, the Commandant of the Corps, was not found at Kherwada that day, and so I had to return to Udaipur.

Thereafter I went to Jai Samand in Mewar and interviewed, on the banks of that lovely lake, a number of Bhils and many Minas also. The latter were quite definite that the Bhils were not Minas. "For", they said, "these Bhils here hunt and eat crocodiles, a meat that no Mina would touch."

The Bhils at first claimed to be Minás, but, when informed of what the Minas had said, took umbrage. Their claim was entirely forgotten. "The Minas said that, did they? Well, We'll tell you about them. The Minas eat the bodies of dead animals. We Bhils would never do so degrading a thing."

I left hastily and before further questioning could lead to a free fight.

The next day I went out to Lakerwas, a village on the plains and some miles from Udaipur. There I found settlements of Minas and Bhils living side by side. As many as possible from each were collected and questioned. I do not know what the Bhils might have said if questioned separately, but, in the presence of the Minas, they readily agreed that they were Bhils and that there was no inter-marriage or inter-dining between the Minas and themselves. Another distinction mentioned was that the Minas were devotees of Kalaji, whilst the Bhils worshipped Mataji.

By this time I was quite convinced that the Rai Bahadur's proposition was incorrect. What I could not understand, however, was how this claim to be something they were not was so widespread among the Bhils. My Bhili friend's explanation seemed insufficient, since the men in the Bhil Corps are recruited from quite a small area, mainly around Kherwada. So I decided to go again and consult Major Maxwell.

That officer was somewhat surprised to hear that his men, serving or retired, claimed to be aught than Bhils. He called in an Indian Officer and asked him about it.

"Yes" said the Subedar, "Bhils have now for some years been calling themselves Minas, though not while serving". And he went on to explain the circumstances which gave rise to this phenomenon.

"Some time back," he told us, "a political agitator, of the name of Motilal, started a campaign among the Bhils of what he termed 'uplift'. One of the things he advocated was giving up the despised name of Bhil and taking that of Mina instead".

"I remember him," interrupted Major Maxwell. "He caused a great deal of trouble, but finally was arrested and is now under political surveillance at Udaipur. But I never heard till today about his advice to the Bhils to change their name."

And so the theory of Rai Bahadur Gaurishanker Ojha was exploded, but I hope he will forgive me for having lighted the fuse. It is not often that he is wrong in matters connected with history, I imagine.

Before the census was actually taken the States were asked to take what steps they considered appropriate to secure a true return of 'tribe' from the Bhils. The following table shows how far these steps were successful:—

CENSUS OF BHILS OVER LAST THIRTY YEARS.

State	1921	1931	1941	Remarks
Banswara	117,401	144,925	170,640	The figures for 1941 exclude Danta and Palanpur, newly incorporated into Rajputana. Figures of Bhils for these two States were 7,529 and 8,601 respectively.
Dungarpur	93,929	123,350	156,587	
Mewar	189,151	216,283	211,190	
Other States in Rajputana	149,050	171,089	95,201	
Total ..	549,531	655,647	733,618	

From the above and from calculations of increases among the Minas and Bhils over the last twenty years, it seems likely that at least 20,000 Bhils must have returned themselves as Minas in 1941.

Recently Pandit Shivapuri, the Census Superintendent for Banswara State, discussed this trend with the writer. He related how, during his tours, he was much struck by the following discoveries.

He first visited a village named Loharia, situated at some distance from the Mewar border. There all Bhils declared themselves to be Bhils. Continuing his journey westward, towards Mewar, his next stop was at Mota Ghara. In that village the Bhils returned themselves as Minas or Bhils. The last village he visited was Jagpura, which is right on the Mewar border. There every Bhil returned himself as a Mina. He learned also that not infrequently nowadays Bhils and Minas intermarry.

Further indication of the trend towards fusion of these two tribes was given by changes in leg-rings fashions among the Bhil women.

One of the most distinctive features of Bhilis is the wearing of broad brass leg-rings from ankle to knee. The Minis, on the other hand, wear only a few light anklets. Pandit Shivapuri reports that in these villages, where the Bhils show the greatest tendency to call themselves Minas their women are also discarding their time-honoured fashion in leg-rings in favour of the lighter and fewer anklets worn by the Minis.

This, of course, is all very interesting and suggests that in course of time, these two tribes may become indistinguishable. It does not, however, alter the facts of past history or the original separateness of these two peoples. If it goes to prove anything, then it is that in India even backward and non-Aryan peoples are becoming more politically minded, and that the seeds of democracy, for good or evil, have not fallen on stony soil.

The second matter for consideration is the much debated problem of whether Bhils should, in the main, be classified as Hindus or as Animists.

It is difficult to imagine such a question being debated in any country save India. Religion is a matter of the heart. It denotes a man or a woman's relation towards his or her Maker. What a person's religion is, therefore, can only be answered by that person and by no one else. The logical approach to the question, then, would be to ask the Bhil to state his faith; and that, broadly speaking, was the instruction given to enumerators for the census of 1941.

But, because in the past the variations in the number of Bhils who had returned themselves as Hindus or Animists at each census showed startling ups and downs, and were clearly traceable to the idiosyncrasies of the enumerators rather than to the Bhils themselves, and because there were indications in 1940 of a move to persuade all Bhils to declare themselves as Hindus at the forthcoming census, it was thought necessary to attempt a re-examination of the subject.

With this end in view all States with Bhil populations were addressed and asked their opinion as to whether Bhils (other than those who professed Christianity) should be classified as Hindus or Animists. In every case the reply was: "As Hindus".

It would have been interesting to have been able to follow this matter up and to have given a table showing exactly how many Bhils were returned in 1941 as Hindus, Christians and Animists respectively. Unfortunately war-time economies required that no religion table should be

extracted. The figures, therefore, are not available. My impression, however, is that, except for a few converts to Christianity, practically every Bhil, male and female, was returned as Hindu by religion *.

How far this state of affairs represents the true wishes of the Bhils themselves and how far it is due directly to the aspiration of the Hindus to increase their political strength, is difficult to assess In dealing with illiterate and backward people enumerators not infrequently record answers according to their own lights and without referring to the person being enumerated. A Hindu enumerator with missionary or political urgings is quite capable of returning every Bhil as belonging to his own faith as a matter of course. But this much can be said, that, as far as my personal knowledge goes, most Bhils are desirous nowadays of being recognized as within the folds of Hinduism.

Anyone unacquainted with this curious country might think that there was no more to be said on the subject. Such a conclusion, however, would be very wide of the mark. The question still remains as to what is meant by the term Hinduism, and in examining this some interesting facts emerge.

In the first place it is often said that Hinduism is not a religion at all. Certainly the orthodox members of those people whom the world terms Hindus do not use the word. Their religion is † *Sanatan Dharam*; what, in fact, is more commonly known as Brahminism. Another writer has defined Hinduism as the whole social structure of the people of Ind or Hind, who follow to some extent the Brahmanical form of teaching, and who are tolerated as part of the structure, however humble.

These 'Humble' ones are descendants of aboriginal and non-Aryan folk, who were broken up by the Aryan invasion and driven into menial roles in life. Gradually they lost their tribal organisations and came to form the "depressed" and "untouchable" classes, within, yet only on the fringe of, Hindu Society. In the course of the centuries they evolved for themselves the countless castes and sub-castes we find to-day. Originally the Vaisyas, due to their mixed Aryan and non-Aryan descent, were undoubtedly numbered among the humble. Today, curiously enough, they are recognized as well within the portals of Sanatan Dharam and, indeed, are some of its staunchest and most orthodox supporters. There are signs that the "untouchables" may yet gain for themselves a similar elevation in status.

Drawing together the threads of the argument, it may perhaps be stated concisely thus. Among those whom the world knows as Hindus, there are two distinct grades of religion. The first grade is *Sanatan Dharam*, into which one can (in theory at least) only gain admission by birth and the members of which are limited to the three main Hindu classes— Brahmins, Kshatryas and Vaisyas. The second is Hinduism which requires only some (often nominal) adherence to the Brahmanical form of teaching, and the members of which are tolerated and, as a rule, regarded as "untouchable". In orthodox Hindu eyes those who follow neither Sanatan Dharam nor Hinduism are outside the pale entirely and do not count in any way: it is no concern of the orthodox Hindus as to what weird souls inhabit the earthly shape of Christians, Mahomedans, Animists and the like.

Returning now to the Bhils, let us, in the light of what has already been written, examine their claim to be regarded as followers of Hinduism.

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* Th position is this. Bhils are 44% of all the Tribes. Among the Tribes 1,682,000 returned themselves as Hindus out of a total of 1,716,000. There were only 1,394 Christians, 26,900 Muslims and 5,706 Animists in 1941.

†. This term can be translated as 'Original revelation' and the claim that the words involve may rest on a sound historic basis. What later descendants of those to whom the revelation was entrusted have made of it is another story entirely: and one, incidentally, of considerable interest.

In the first place I will quote a number of reasons, given to me by Miss E.A. Maxwell of the Canadian Mission at Banswara, as to why, in her opinion, Bhils, in that State at least cannot claim to be Hindus by religion. This lady has spent many years among the Bhils and few people, probably, have such an intimate knowledge of their customs and manners. These were the reasons she gave:—

(a) They do not, as a regular rule, worship before Hindu idols,

(b) They do not enter Hindu temples,

(c) They do not have images of idols in their houses,

(d) They do not employ Brahmin priests for any of their ceremonies, such as birth, marriage and death, but employ their own Bhopas and Jogis, who are Bhils,

(e) They believe that on death they become Bhuts (spirits) but they do not believe in re-birth in human or animal form,

(f) They live in great fear of evil spirits, and most of their religious practices are endeavours to propitiate these spirits, which always seem bent on harming them.

Miss Maxwell, in fact, leaves no room for doubt that the term " Animist " would be the correct one to describe the religion of the Bhils whom she knows so well.

Miss Maxwell has made out a very strong case, but a year's careful investigation of the subject leads me to suggest that there are one or two aspects of the question which have escaped her notice. I hope she will forgive me for pointing them out.

In the first place Hindus are themselves Animists. It follows, therefore, that the attribution by the Bhils of a soul to inanimate objects or to natural phenomena cannot in itself be used as an argument for their exclusion from the Hindu fold.

Secondly, there is a mass of evidence to show that the Bhils have since @ long paid homage to some of the Hindu deities, especially Mataji. I agree that this does not signify that they have abandoned their old traditional beliefs. They certainly have not. What they have done, however, to an extensive degree is to graft certain Hindu gods and goddesses on to their own list of objects of worship. Nor is the explanation of this difficult to follow. The Hindus defeated the Bhils so often in the past, that the latter came to the conclusion, that the Hindu gods were more powerful than their own. It was obviously the same idea which prompted an old Bhil to remark to a British Officer after the suppression of the Bhil rising in Mewar: "Since you defeated us, Saheb, I always salaam when I pass a Christian church".

Nor, I suggest, is there really any significance in the fact that the Bhils do not call in a Brahmin priest to conduct their ceremonies. Many other low but recognized Hindu castes do the same—the Kanjars for instance.

Perhaps the strongest argument against the inclusion of Bhils in Hinduism is the fact that, although the Hindus have long regarded them as a thoroughly degraded tribe and not to be

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@ In "A Memoir of Central India", Vol. II. by J. Malcolm and published in 1824, there is mention of this fact. Also in Panta I was informed that Bhils, for centuries past, had been devotees at the shrine of Amba Mataji. I myself have seen them worshipping at Rakabdevji in Mewar. Pandit Shivapuri assures me that Bhils in Banswara freely attend worship in Hindu temples alongside caste Hindus.

absolved from the ‡detested crimes of cow-killing and of eating carrion, they h
them to be "untouchable", as they certainly must have done had they considered th ver held
pale of Hinduism. To appreciate the full significance of this it has to be remembere in the
"untouchable" one must be within the warp and weft of the Brahmanical faith, howev to be
r.

Further weight is given to this argument by the fact that the Sudras, whose et.
differentiation from the Bhils is slight, both being aboriginal in origin yet having some adm
of Indo-Aryan blood, are regarded as "untouchable". The explanation for this, howev
I think, fairly clear. The Sudras early lost their tribal organisation and became attached to
fringe of Hindu Society. The Bhils, on the other hand, though in distinct classes, have he
themselves almost entirely apart by geographical reasons from Aryan assimilation and hav
preserved their tribal organisation. This, however, lends no support to the case for their being
regarded as proselytes to Hinduism.

What would appear to have happened is this. From the time of the Aryan incursions into India, possibly even before that, the Bhils lived in the forests of south-eastern Rajputana, Central India and Khandesh. They lived as "early man" probably lived everywhere as dependent on the jungle as the beasts themselves. They grew no crops; the forest supplied most of their simple wants of food and shelter. Those wants which the forest could not supply, they sought to obtain by holding-up Aryan travellers and robbing them. It was due to this latter propensity that they came up against the new rulers of the land and often received harsh punishment at their hands. "Their gods are stronger than ours", they told themselves and held them in high respect.

And so it continued for centuries till, with the Pax Britannica, they found their old stand-by of blackmail come to an end. Hunger forced many of them to leave the jungle-clad hills and to move down and cultivate the plains.

Now, when a people begin to move they alter their values in life. An urge was born in them to be recognized as something better than wild creatures of the forest, despised and detested by all. They saw the Minas, not greatly unlike themselves yet more respected. They eagerly jumped at a suggestion to change their name from Bhil to Mina. They saw the Hindus and remembered the old respect they had learnt to be due to their gods. And just when these urges were becoming a passion, along came Arya Samaj missionaries and other politically-minded Hindus inviting them to consider themselves Hindu by religion and presumably also by community. Their cup of gladness was full: at last they were on the ladder reaching up to social recognition. Of course they would return themselves as Hindus at the forthcoming consus.

We have arrived at the point then, that most Bhils appear to desire to return their religion as Hinduism, and who is to say that they have not as much right to do so as the Muslim who declared himself to be a Jain, the Scots-woman who said she was a Muslim or the Christian who proclaimed himself a Lapsed Methodist, or even the father who informed the enumerator that two of his children had been immaculately conceived or he hoped they had been since he was away for several years covering their births–all of which declarations were accepted at face value?

In the case of the Bhils, however, it has to be admitted that there is this difference–one which may turn out to have no small import in the future. Their swing-over to Hinduism is a mass movement and, whether at heart the Bhil is genuinely attracted by the tenets of Brahmanism or not, there can be no doubt that, from the Hindu point of view, his conversion has

‡ Many Bhils have assured me that they have now abandoned these practices, since they are incompatible with Hinduism. This may be true.

al than religious significance. But, to set against this, is the fact that Hindus themselves are more divided on the subject. Orthodox Sanatanists are opposed to recognizing as Hindus anyone except themselves, and would class all those others, such as Sudras, hinduized Bhils and the like, as belonging to "other religions". It is only the advanced and politically-minded people who would open the doors of their temples to these humble converts to the Brahmanical faith. Till this battle is fought out the real significance of the present Bhil move cannot be gauged, nor its results to themselves appraised. Were the Sanatanists to prevail and the Bhils adhere to their present resolve, then they might find that, in the end, they had only gained the unenviable and despised status of an " untouchable ".

In the meantime the field is open to any other religion or community that cares to woo the Bhils for their future voting power. The Bhil has always been catholic in his outlook, and he might quite easily, at present at least, be persuaded that his best interests lay in attaching himself to someone else's gods. Perhaps at the next census we shall find that all Bhils are Buddhists, Muslims, or Christians: stranger things have occurred.

ANNEXURE II.

Distribution of Scheduled Tribes by Livelihood Classes in Rajasthan and Ajmer.

S.N.	Natural Division and District	Total			I Cultivators of land wholly or mainly owned & their dependants.		II Cultivators of land wholly or mainly unowned & their dependants.		III Cultivating labourers and their dependants.		IV Cultivating owners of land; agricultural rent receivers and their dependants.		V Production (other than cultivation).		VI Commerce.		VII Transport.		VIII Other services and miscellaneous sources.	
		Persons	Males	Females	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	Rajasthan State ..	316,345	156,915	159,433	147,495	148,976	4,878	6,333	2,707	2,721	507	482	289	107	34	15	4	4	1,001	705
2.	Rajasthan Hills Division	309,035	153,095	155,060	145,342	145,986	4,593	6,071	2,409	2,376	469	430	266	178	29	11	4	4	883	604
3.	Dungarpur District ..	94,031	46,093	47,038	44,793	44,966	512	488	1,104	1,086	157	229	43	65	5	3	2	3	377	198
4.	Banswara District ..	215,024	107,002	108,022	100,549	101,020	4,081	5,583	1,305	1,290	312	201	223	113	24	8	2	1	506	406
5.	Rajasthan Plateau Division	6,693	2,920	3,773	2,153	2,990	285	262	298	398	38	52	23	19	5	4	..	..	118	101
6.	Chittorgarh District ..	6,693	2,920	3,773	2,153	2,990	285	262	298	398	38	52	23	19	5	4	..	..	118	101
7.	Ajmer State ..	9,816	5,072	4,774	1,303	1,206	882	794	430	371	295	273	1,076	1,059	555	542	217	192	275	307

NOTE:— I. Only those districts and divisions (given in table above) are of Scheduled area.

II. Figures given against the Chittorgarh District represent only Pratabgarh Sub-Division as this is only a Scheduled area in the District.

APPENDIX VI

ECONOMIC QUESTIONS AND THEIR INSTRUCTIONS

Economic questions and their Instructions.

1. The Registrar General's instructions on the economic questions of the census questionnaire are quoted for the benefit of the readers. The following is a quotation *in extenso* of his instructions on census questions 9, 10 and 11:—

The symbols were converted into abbreviations in case of Rajasthan and Ajmer.

CENSUS QUESTIONS 9, 10 AND 11 AND RELATED INSTRUCTIONS.

1. The Census is concerned with two economic characteristics of every individual—his economic status, and his means of livelihood. The scope and meaning of these expressions will appear from an explanation of the three census questions, *viz*:—

Question 9—Economic status;

Question 10—Principal Means of Livelihood ; and

Question 11—Secondary Means of Livelihood

2. **Form of questions:**

Question 9:—Economic status.

PART ONE—Dependency—Write 1 for a self-supporting person, 2 for a non-earning dependant, and 3 for an earning dependant. Write the answer in the first compartment.

PART TWO—Employment—If a self-supporting person earns his Principal means of livelihood as an employer write 1, as an employee write 2, as an independent worker write 3. Write 0 in other cases. Write the answer in the second compartment.

Question 10—Principal means of Livelihood.—An answer to this question should be recorded on every slip. If the slip relates to a self-supporting person record his principal means of livelihood. If the slip relates to a dependant (whether earning or non-earning) record here the principal means of livelihood of the self-supporting person on whom he is dependant. The means of livelihood which provides the largest income is the principal means of livelihood for a self-supporting person who has more than one means of livelihood. In the case of other self-supporting persons it is the only means of livelihood.

Use the following contractions.—Write 1 for a person who cultivates land owned by him; 2 for a person who cultivates land owned by another person; 3 for a person who is employed as a labourer by another person who cultivates land; 4 for a person who receives rent in cash or kind in respect of land which is cultivated by another person.

For all other means of livelihood write fully and clearly what the person does in order to earn his livelihood and where he does it.

Question 11—Secondary means of livelihood.—For a self-supporting person who has more than one means of livelihood write the means of livelihood next in importance to his principal means of livelihood. For an earning dependant write the means of livelihood which provides the earning. Use contractions given in question 10.

For a self-supporting person who has only one means of livelihood write 0. In the case of a non-earning dependant also, write 0.

3. **Question 9—Economic Status**—This question is in two parts. The first part requires the labelling of every person as "a self-supporting person" or "an earning dependant" or "a non-earning dependant"

Every single human being must be allotted one of these labels and not more than one of them, and this will be referred to as his Primary Economic Status.

The second part of the question has no application to non-earning dependants or to earning dependants. It relates only to self-supporting persons; and even among them those exceptional cases of self-supporting persons who support themselves without gainful occupation or economic activity (*e. g.*, rentiers and pensioners) are not covered. All others (that is, all those self-supporting persons who are both economically active and gainfully occupied) are to be allotted one or other of the three labels, *viz.*, "Employer", "Employee" or "Independent Worker"; and this will be referred to as his Secondary Economic Status.

The following extracts from the model-instructions to enumerators explain the criteria to be applied and the treatment of border-line cases.

"Where a person is in receipt of an income, and that income is sufficient at least for his own maintenance then he (or she as the case may be) should be regarded as a "self-supporting person". Such income may be in cash or kind.

Anyone who is not a "self-supporting person" in this sense is a "dependant". A dependant may be either an "earning dependant"or a "non-earning dependant"; the test is whether or not he secures a regular income, even though it may be small. Where the income which he secures is not sufficient to support him, that person is an 'earning dependant'. A person who does not secure any income either in cash or in kind, is a 'non-earning dependant'.

Where two or more members of a family household jointly cultivate land and secure an income therefrom, each of them should be regarded as earning a part of the income. None of them is, therefore, a non-earning dependant. Each of them should be classed as either a self-supporting person or an earning dependant according to the share of income attributable to him (or her). The same applies to any other business carried on jointly.

This does not mean that anyone who works is necessarily a self-supporting person or an earning dependant. Thus, for instance, a housewife who cooks for the family, brings up the children or manages the household is doing very valuable work. Nevertheless, her economic status is that of a non-earning dependant, if she does not also secure an income.

An Employer (is) only that person who has necessarily to employ other persons in order to carry on the business from which he secures his livelihood. A person (who) employs a cook or other person for domestic service should not be recorded as an employer merely for that reason.

Persons employed as managers, superintendents, agents, etc.. (who) control other workers are also employees only, and should not be recorded as employers.

An independent worker means a person who is not employed by anyone else and who does not also employ anybody else in order to earn his livelihood,."

4. **Question 10—Principal Means of Livelihood**—"Means of Livelihood" of any individual ordinarily means the gainful occupation which forms the source from which that income which is utilised for his maintenance is normally derived; but it is more comprehensive, inasmuch as in exceptional cases, income may be secured without gainful occupation. "Principal Means of Livelihood" means the same thing as "Means of Livelihood" for every person who has only one means of livelihood. Where a person has more than one, that which gives him the greater part of his income is his "Principal Means of Livelihood". In the sense thus defined, every human being, without any exception, has a Principal Means of livelihood—whether or not he is a self-supporting person. Every non-earning dependant is maintained exclusively by the income of some self-supporting person on whom he is dependant. Consequently, the Principal Means of Livelihood of the latter is required to be recorded as the Principal Means of Livelihood of the former. The same rule applies to Earning Dependants also (no attempt being made to assess the degree of sufficiency of his own income or the extend of his dependence on others).

Agricultural and non-agricultural means of livelihood are distinguished by the manner in which enumerators are required to record the answers to this question. This is important for purposes of subsequent classification of the answers. The following extracts from instructions are relevant:—

"Four simple contractions have been provided which will cover most cases where the livelihood is dependant on agriculture—Write 1 for a person who cultivates land owned by him; 2 for a person who cultivates land owned by another person; 3 for a person who is employed as a labourer by another person who cultivates land; 4 for a person who receives rent in cash or kind in respect of land which is cultivated by another person. If you find that a person falls under two of these categories note that category which provides the largest income against question 10 and the second against question 11. No note need be taken of more than two such categories in any case".

"In all other cases.....Write fully and clearly what the person does in order to earn his livelihood and where he does it. There are three lines on the slip provided for answering this question. Use them fully. Avoid vague and general terms. Do not write "service", or "labour". If you are enumerating a trader, describe the articles in which he is carrying on trade and state clearly whether he is a wholesale trader or a retail trader. A retail trader sells to the public. A wholesale trader does not. If you are enumerating a factory worker give the name of the factory or the product it makes, e.g., coal mine, jute factory, cotton mill, etc."

(NOTE—The word "owned", used in relation to land, includes every tenure which involves the right of permanent occupancy of land for purposes of cultivation. Such right should be heritable; it may be, but need not necessarily be, also transferable).

5. **Question 11—Secondary Means of livelihood**—A self-supporting person may or may not have more than one means of livelihood. If he has more than one, that which provides the greatest income is recorded under question 10 as the "Principal Means of Livelihood" and the next under Question 11 as the "Secondary Means of Livelihood". It has been laid down that no note should be taken of more than two such means of livelihood in any case.

The answer to this question is invariably 'Nil' for non-earning dependants. *Ex hypothesi* they secure no income; they are supported by the Principal Means of Livelihood of the persons on whom they are dependant which alone is taken to be their only means of livelihood.

In the case of every earning-dependant, there are two means of livelihood which are combined in order to support him. One is the Principal Means of Livelihood of the person on whom he is dependant. The other is the source where from he secures his own income. The former is always to be treated as the "Principal Means of Livelihood" of the "earning dependant"; and the latter as his "Secondary Means of Livelihood".

6. Further elucidation of the scope and implications of these questions has been provided in supplementary instructions in the form of question and answer.

These are extracted below:

I—Census Question 9 (1)

Answer—Yes. The instructions mean what they say. A person must be deemed to be self-supporting if his income (such as it is) is sufficient to support him individually at his present level of living (such as it is). He does not cease to be self-supporting merely for the reason that he, his wife and children taken together are not maintained by his own income.

If the wife and children have no income of their own, they are non-earning dependants. The instructions provide that their principal means of livelihood should be deemed in every case to be the same as that of the person on whom they are dependant. This would in most cases be the husband or father who will also be the head of the household. In those exceptional cases where the husband or father is not the head of the household, and is also not able to support anyone but himself, then the head of the household in which the non-earning dependant is living is the person on whom he (or she) is dependant.

Remember—every "family household" is (collectively) self-supporting; otherwise it would not exist. The surplus of self-supporting persons within a family household is in every case sufficient to meet the deficit on the earning and non-earning dependants in that family household.

Question 3:—In the instructions it is recorded that if two or more members of the family household jointly cultivate land they would be classed as self-supporting or earning dependant "according to the share of income attributable to him or her". How are these shares to be assigned ? What about females who, in some cases, take an active part in agricultural operations ?

Answer.—The share of the income attributable to a person is what the head of the household (or whoever is the managing member) deems it to be. No attempt should be made to make a detailed calculation of this share. All that has to be ascertained is whether (in the opinion of the head of the household or managing member) the member concerned is entitled to a share which would be sufficient to cover the cost of his own maintenance.

If the answer is 'yes', he is 'self-supporting'; if the answer is 'no', he is an 'earning dependant'.

The considerations are exactly the same whether the individual is a male or a female, an adult or a non-adult.

II—Census Question 9 (2)

Question 4.—Are doctors and lawyers, who employ compounders and clerks independent workers or employers ?

Answer:—They are employers. A doctor employs a compounder in order to relieve him of part of the work connected with the business on which he is engaged and by which he secures his livelihood. A lawyer employs a clerk for a like purpose.

Question 5:—A money-lender employs four persons to realise interest. Is he an employer or independent worker ?

Answer:—He is an employer. He would be an employer even if he employed only one person provided that person was regularly employed and derived his principal means of livelihood by such employment. Casual employment, or part-time employment which does not provide the principal means of livelihood of the person employed, should not be taken into account.

Question 6:—What is the status of tenants or zamindars who do not cultivate themselves but employ labourers ?

Answer:—If they employ others they are 'employers'—provided the purpose of the employer and the nature of the employment are as stated in the answers to the two preceding questions.

Question 7:—What is the status of beggars; orphans in orphanages; convicts in jail ?

Answer:—They fall in none of the three categories. Record 0 for them.

III—Census Question 10—

Question 8:—What is the category of a minor, a blind person or a lady who has land in his or her name but gets it cultivated by labourers.—Category 1 or Category 4 ?

Answer:—Learn to distinguish between "cultivation of the land". and "performance of labour necessary for cultivating the land". There are. of course, millions of persons who perform both functions—but the functions are distinguishable and should be distinguished. The man who takes the responsible decisions which constitute the direction of the process of cultivation (*e. g.*, when and where to plough. when and what to sow, where and when to reap and so on); it is this person who should be referred to as the cultivator, even though he does not perform any manual labour whatever. The man who ploughs. or sows, or reaps, under the direction of someone else is not the cultivator—but a cultivating labourer. a different thing altogether.

The cultivator may be owner of the land cultivated. In that case he is category 1, whether or not he also combines in himself the functions of a cultivating labour.

Alternatively, the cultivator may be a lessee, an agent or manager (paid or unpaid). Even in this case it is immaterial whether this lessee or agent or manager also combines in himself the functions of a cultivating labourer; he (the cultivator) is category 2, and the other person (the owner) is category 4.

Applying these principles, the answer to the question put, depends on whether the minor, blind person. or lady does or does not actually direct the process of cultivation. If the person does this. the answer is category 1; otherwise the answer is category 4.

The following is quoted from the Registrar General of India's note on 'The Indian Census Economic Classification Scheme' which. apart from explaining the scheme, elaborates the concepts behind it and how the economic tables in the Census of 1951 should be read or interpreted. Further details will be available in Chapters IV and V and the title pages of the three economic tables in the Tables volume.

THE INDIAN CENSUS ECONOMIC CLASSIFICATION SCHEME.

1. **1931 Scheme of Occupations**—The last occasion on which the economic characteristics of the people were not only ascertained but also classified and tabulated on an All-India basis was in the 1931 Census.

The basis of classification adopted at that census was a Scheme of Occupations consisting of four Classes, 12 Sub-classes, 55 Orders and 195 Occupational Groups. The total following the occupations for each Class, Sub-class, Order and Group was given, together with sub-totals for numbers following occupations as "principal occupation" or as "working dependant" or as "subsidiary to other occupations".

2. **ICEC Scheme**—The Scheme of Classification set out in this memorandum may be referred to as the Indian Census Economic Classification Scheme. It is based on the 1931 Scheme of Occupations. It embodies, however, extensive revision and re-arrangement designed to secure the following purposes *viz.*—

(i) to establish a comprehensive economic classification of the people as a whole, and not merely of persons who are gainfully occupied;

(ii) to simplify and improve the method of presentation of census economic data: and provide additional data;

(iii) to secure international comparability of data as recommended by the Economic and Social Council of United Nations.

3. **Basis of Classification—Economic Status and Means of Livelihood**—The 1951 Census seeks to ascertain the "economic status" and the "means of livelihood" of every person enumerated. Questions 9, 10 and 11 relate to these economic characteristics. The answers to Question 10 and the two parts of Question 9 will form the basis of classification of each individual.

4. **Livelihood Categories and classes**—On the foregoing basis, the people will be divided into two broad livelihood categories, *viz.*, the Agricultural Classes and the Non-Agricultural Classes.

There will be four Agricultural Classes, defined as below:—

I—Cultivators of land, wholly or mainly owned; and their dependants

II—Cultivators of land, wholly or mainly unowned; and their dependants

III—Cultivating labourers; and their dependants and

IV—Non-cultivating owners of land; agricultural rent-receivers; and their dependants.

There will be four Non-Agricultural Classes, defined as comprising all persons (including dependants) who derive their principal means of livelihood from—

V—Production (other than cultivation)

VI—Commerce

VII—Transport

VIII—Other Services and Miscellaneous Sources

All these Classes will be referred to as Livelihood Classes.

5. **Livelihood Sub-classes**—Each of the 8 Livelihood Classes will be divided into three sub-classes, with reference to their economic status as below:

(i) Self-supporting Persons;
(ii) Non-earning Dependants; and
(iii) Earning Dependants.

6. **Economically active, semi-active, and Passive persons**—All non-earning dependants are economically passive. They include persons performing house-work or other domestic or personal services for other members of the same family household. But they do not include "unpaid family workers" or persons who take part along with the members of the family household in carrying on cultivation or a home industry as a family enterprise.

All earning dependants are economically semi-active only. Though they contribute to the carrying on of economic activities, the magnitude of their individual contribution is deemed to be too small to justify their description as economically active. (Their contribution to economic activity is, however, taken into account, in the tabulation of data based on secondary means of livelihood.)

All self-supporting persons are ordinarily, economically active. But, there are certain classes and groups which constitute an exception to this rule.

These are mentioned below:

(i) All self-supporting persons of Agricultural Class IV.

(ii) The following groups of self-supporting persons who are included in Non-Agricultural Class VIII, and derive their principal means of livelihood from miscellaneous sources (otherwise than through economic activity):

(*a*) Non-working owners of non-agricultural property,
(*b*) Pensioners and remittance holders,
(*c*) Persons living on charity and other persons with unproductive occupations, and
(*d*) Inmates of penal institutions and asylums.

7. **Classification of economic activities and economically active persons**—Economic activities may be defined as including all activities of which the result is the production of useful commodities or the performance of useful services; but not including the performance of domestic or personal services by members of a family household to one another.

The most important among all economic activities is the cultivation of land (or the production of field crops). It stands in a category by itself. All other economic activities may be regarded as falling in another category which may be referred to as "industries and services". All these activities may be classified with reference to the nature of the commodity produced or service performed. Under the present scheme, all Industries and Services are classified in 10 divisions; and these divisions are sub-divided into 88 sub-divisions. The scope of activities included in each sub-division is indicated by its title, as well as by the specification of groups which are comprised in them.

Economically Active Persons engaged in cultivation, are either cultivators or cultivating labourer--- that is, they are persons of sub-class (i) of Agricultural Classes I to III.

Economically Active Persons engaged in Industries and Services are classifiable in divisions and sub-divisions. All persons included in each sub-division are further divisible into three sections, *viz.*,

(i) Employers.
(ii) Employees, and
(iii) Independent Workers.

In effecting this classification, no account will be taken of whether the classified person was actually employed or unemployed on the date of enumeration. He should be allocated to that particular description of economic activity, from which he has in fact been deriving a regular (that is non-casual) income, as his principal means of livelihood.

The instructions to the enumerator ran as follows:—

The share of the income attributable to a person is what the head of the household (or whoever is the managing member) deems it to be. No attempt should be made to make a detailed calculation of this share. All that has to be ascertained is whether *in the opinion of the head of the household or managing member* (the italics are mine. A. M.) the member concerned is entitled to a share which would be sufficient to cover the cost of his own maintenance.

If the answer is 'yes', he is 'self-supporting', if the answer is 'no', he is an 'earning dependant'.

The considerations are exactly the same whether the individual is a male or a female, an adult or a non-adult.

8. **Form and Method of Tabulation**—The replies recorded in Census Slips against Census Questions 9, 10 and 11 will be used for classifying every enumerated person within the framework of economic classification of the people described above. The result will be exhibited in three tables entitled, "The Economic Tables I, II and III". There will be approximately 350 million census slips which will have to be sorted by hand, and not by mechanical process.

9. **Comments on Economic Tables**—*Economic Table I*—will show the numbers of 24 livelihood sub-classes grouped under 4 agricultural classes and 4 non-agricultural classes. A complete picture will be presented of economically active, semi-active and passive persons.

Economic Table No. II—will specify the number in each of the 8 classes mentioned above, who possess a secondary means of livelihood; and cross-classify them (according to the nature of such means of livelihood) under the same eight classes. [This table is designed to include not only self-supporting persons who have more than one means of livelihood, but also earning dependants—who supplement (with their own contribution) the resources provided for their maintenance by the persons on whom they are dependant. The contribution made to economic activity by economically semi-active persons will be shown by this Table.]

Economic Table No. III—is limited to economically active persons. The numbers of persons engaged in industries and services as a whole, as well as in each division and sub-division thereof will be shown in this table, divided into the three sections "Employers", "Employees", and "Independent Workers".

In all three tables, the numbers are separated by sexes, as well as residence in urban and rural areas. The All-India Tables will furnish totals by States. The State Tables will furnish total, by Districts.

10. **Comparability**—The principal change involved in the present Scheme is the setting up of a comprehensive economic classification of the people as a whole; and not merely of those among them who are engaged in gainful occupation. In the process of sorting of census information, the division of the people into "livelihood classes" takes the place of the division of the people into "communities" at the former censuses.

Consistently with this main purpose, the present scheme of classification is based mainly on the Scheme of Occupations of former censuses. Comparability with the published census tables of 1931 is secured by the references to the Occupational Group numbers of the 1931 Census.